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Mountain Pine Beetles in British Columbia

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Premier's Mountain Pine Beetle Symposium

The battle with the mountain pine beetle is reviewed and adjusted on an ongoing basis. On Nov. 21, 2003 Premier Gordon Campbell hosted a symposium in Quesnel so that stakeholders could discuss implications of the beetle infestation. The agenda included presentations from community leaders, forest managers, forest-health authorities, industry experts, First Nations and environmentalists. It was an opportunity to review previous and existing management strategies, and to look for ways to lessen the beetle's long-term impact on jobs and communities.

Presentations

- John Allan, BC Lumber Trade Council – PDF 190 KB
- Bill Wilson, Canadian Forest Service – PDF 970 KB
- Roy Nagel, Central Interior Logging Association – PDF 14 KB
- Larry Pedersen, B.C.'s Chief Forester – PDF 925 KB
- Doug Routledge, Council of Forest Industries – PDF 1,240 KB
- Christine Kennedy, Forestry Innovation Investment – PDF 190 KB
- Ian de la Roche, Forintek Canada Corp.
    - slide show – PDF 1,390 KB
    - speech – PDF 16 KB
- Mayor Nate Bello, City of Quesnel – PDF 14 KB
- Max Blouw, University of Northern British Columbia – PDF 1,415 KB
- Ric Careless, Wilderness Tourism Association – PDF 30 KB

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Mountain Pine Beetle Symposium
Quesnel Seniors Centre
November 21 from 9:30 a.m. - 4:00 p.m.

9:00 Registration for invited participants

9:30 Opening comments and welcome

9:55 MLA remarks: Dr. John Wilson, Pat Bell, Shirley Bond and Walt Cobb

Morning session – Dr. Charles Jago, Moderator

10:15 Present state of the MPB infestation in BC - Chief Forester, Larry Pedersen

10:30 Industry perspective - Doug Routledge, President, COFI North

10:45 Today's market constraints - John Allen, President & CEO, COFI

11:00 Independent loggers - Roy Nagel, President, Central Interior Loggers Association

11:15 Managing MPB in Parks - Bill Fisher, Executive Director, National Parks

11:30 Question and answer session

Luncheon speakers

12:00 Lunch Break

12:30 Mitigation strategies - reducing impacts on human resources and associated social concerns - Mayor of Quesnel, Nate Bello

12:45 Opportunities for communities - Lee Malleau, Economic Development Commissioner, Squamish

Afternoon session – Dr. John Innes, Moderator

1:00 Where can the industry take us in the future - Alex Ferguson, Chief Forester, Slocan Forest Products Ltd.

1:15 Future land-use planning - Ric Careless, BC Environmental Network

1:30 Access to new markets - Christine Kennedy, President, Forestry Innovation Investment

1:45 Opportunities for increased production and alternative products such as energy production - Ian DeLa Roche, Forintek

2:00 Question and answer session

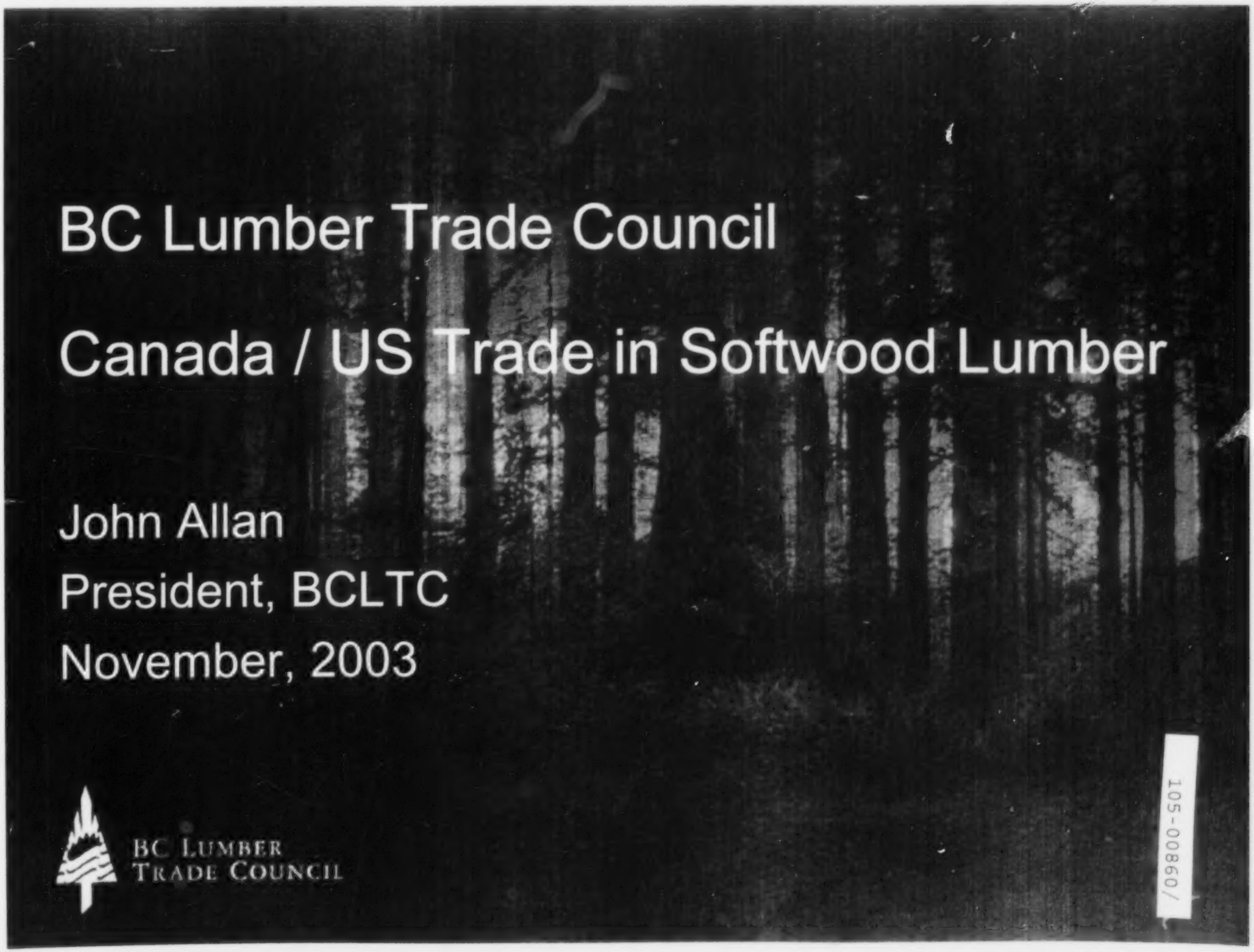
2:30 First Nations - future economic opportunities - Dan George, Chief Negotiator, Wet'suwet'en First Nation

2:45 Federal Mountain Pine Beetle research - Dr. Bill Wilson, Canadian Forestry Services

3:00 Future forests and the role of research - Dr. Max Blouw, Vice President Research, UNBC

3:15 Question and answer session

3:45 Closing remarks



BC Lumber Trade Council

Canada / US Trade in Softwood Lumber

John Allan
President, BCLTC
November, 2003

BC LUMBER
TRADE COUNCIL

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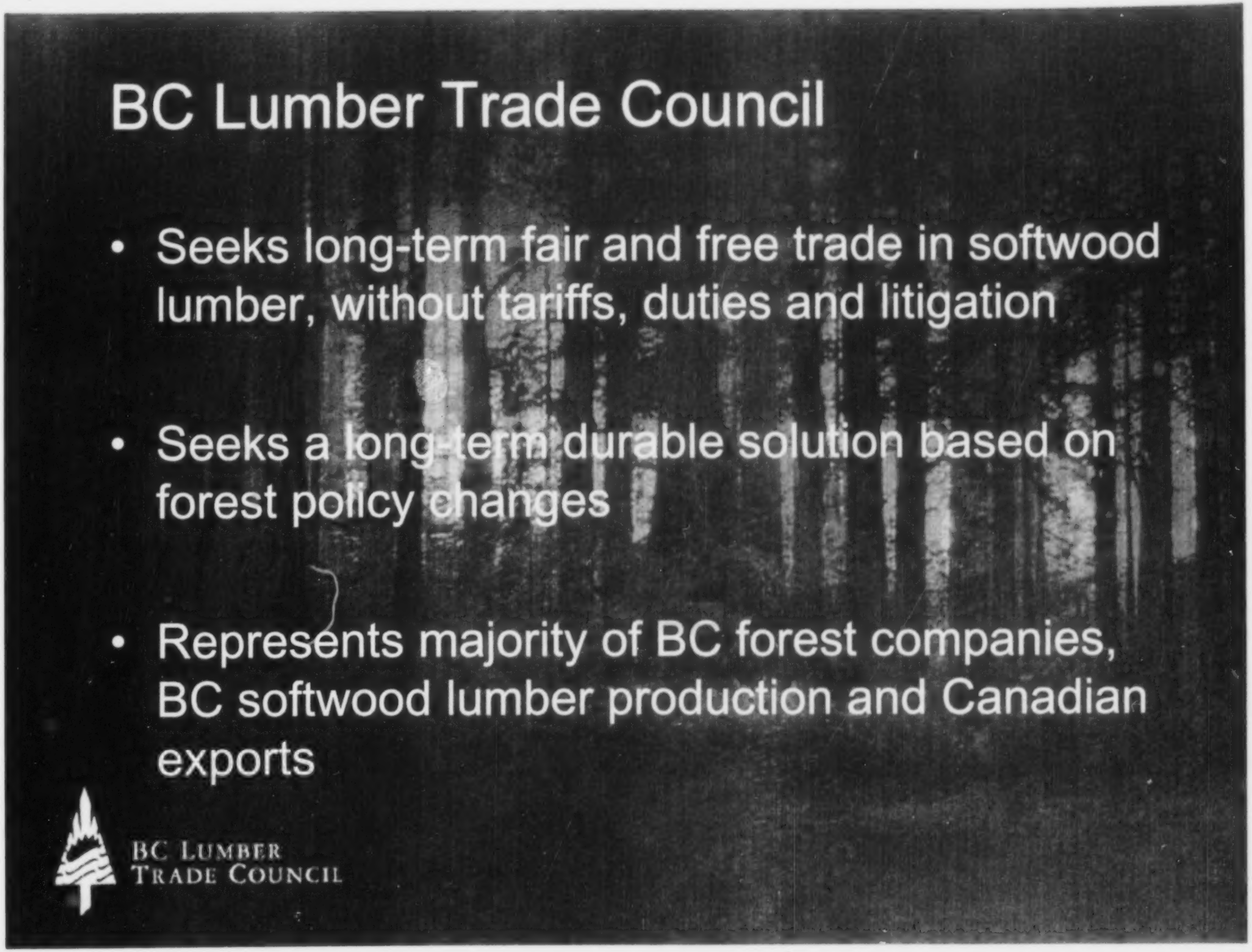

BC Lumber Trade Council

- Seeks long-term fair and free trade in softwood lumber, without tariffs, duties and litigation
- Seeks a long-term durable solution based on forest policy changes
- Represents majority of BC forest companies, BC softwood lumber production and Canadian exports

BC LUMBER
TRADE COUNCIL

Trade Context – Pre 1982

Canadian market share increases 18% to 28% (1975-82)

- Increased US housing starts
- Depreciation of Canadian dollar
- Industrial expansion of BC interior (post 1978)

Fall in US fibre supply

- Environmental legislation
- Severe economic pressures in US Pacific Northwest
- Emerging complaints re:low Canadian (BC) stumpage rates

BC LUMBER
TRADE COUNCIL

Trade Context 1982-2001

Softwood Lumber I (1982)

- Claim of subsidy from low stumpage
- Export subsidy found not to exist
- US industry commences intense lobbying effort

Softwood Lumber II (1986)

- US amends law to make claim of subsidy easier
- Canada/US MOU implements 15% Canadian export tax
- MOU terminates in 1991

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Trade Context 1982-2001

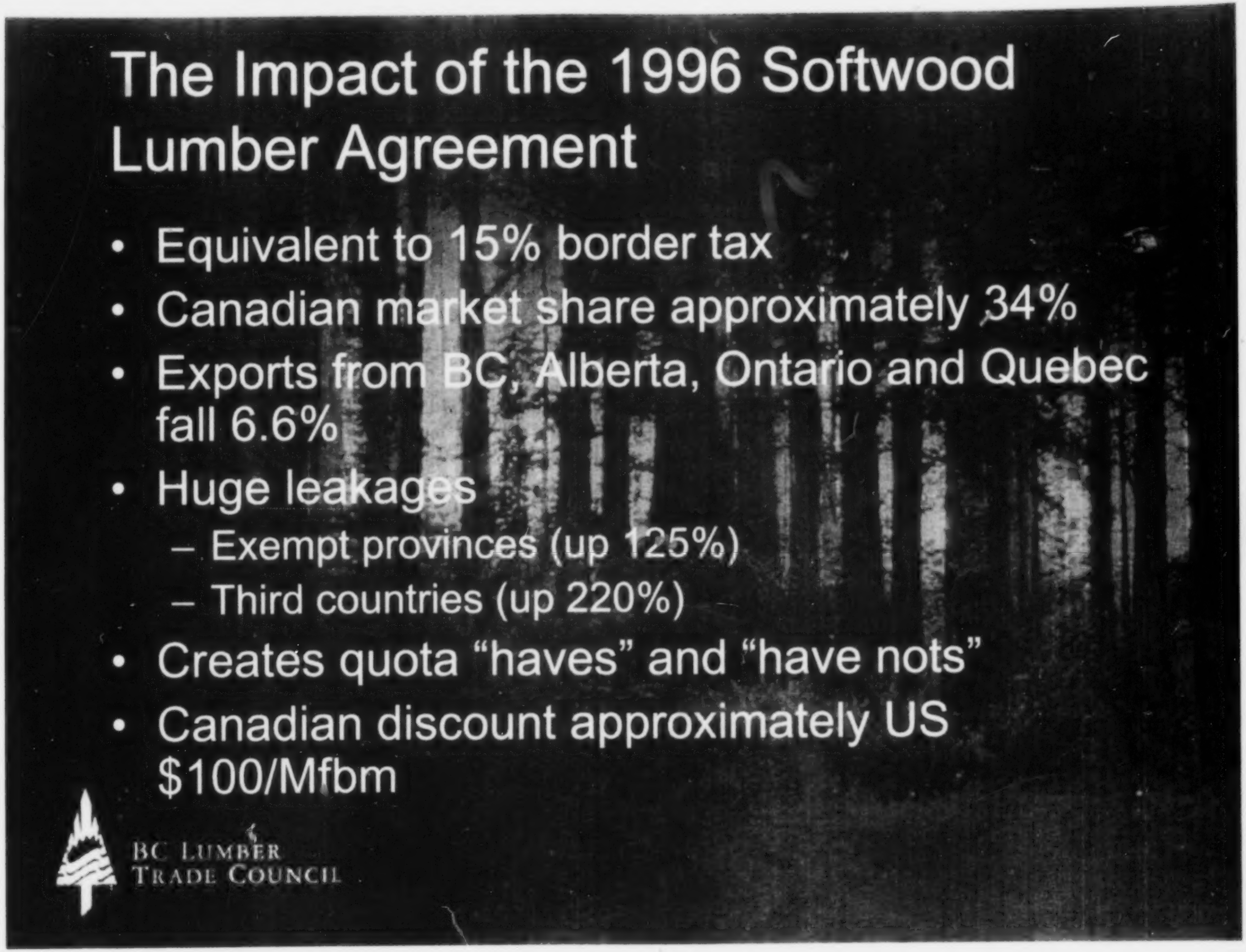
Softwood Lumber III (1991)

- US government self-initiates, with a finding of 11.54%
- NAFTA “Chapter 19” Panel rules in favor of Canada
- US refuses to refund duties unless Canada agrees to negotiations

Softwood Lumber Agreement (1996)

- Quota agreement
- Canada cannot take action to offset the export fee

BC Lumber
Trade Council



The Impact of the 1996 Softwood Lumber Agreement

- Equivalent to 15% border tax
- Canadian market share approximately 34%
- Exports from BC, Alberta, Ontario and Quebec fall 6.6%
- Huge leakages
  - Exempt provinces (up 125%)
  - Third countries (up 220%)
- Creates quota "haves" and "have nots"
- Canadian discount approximately US $100/Mfbm

BC LUMBER
TRADE COUNCIL

Lumber IV – Why?

- September 1999, US position: US and Canada should get out of business of regulating lumber trade
- Coalition rhetoric: if Canada switches to auction-based timber pricing and eliminates cut control and appurtenancy, then trade problem goes away
- BC willing to consider policy solution BUT will issue always be market share and price?
- Price collapse in late 2000/early 2001 leads to large number of US closures/curtailments (recall leakage)
- Lumber IV inevitable, despite rhetoric and willingness to talk

BC LUMBER
TRADE COUNCIL

Lumber IV

- Coalition files petition April 2, 2001
- Alleges subsidy and dumping
- Preliminary countervailing and anti-dumping duties imposed
- Duty cash deposit rates effective May 22, 2002
- CVD (cash deposit) rate: **18.79%**
- AD (cash deposit) rate: **8.43%**
- **Total rate: 27.22%**

BC LUMBER
TRADE COUNCIL

Lumber IV – Anti Dumping Rates

- Targets 6 largest exporters
  - Canfor: 5.96%
  - Slocan: 7.71%
  - Weyerhaeuser: 12.39%
  - West Fraser: 2.18%
  - Abitibi: 12.44%
  - Tembec: 10.21%

- All others rate: 8.43% (average of above 6)

BC Lumber
Trade Council

Commercial Implications

- Shipments require duty deposits paid in cash
- Deposits paid by Canadian companies May 2002 – September 2003 valued at $1.34 billion (USD)
- Appreciation of Canadian dollar adds to cost of exporting lumber

BC LUMBER
TRADE COUNCIL

US Softwood Lumber Consumption Held by Imports

		Canada						Other Countries		Total	
		BC, AB, ON, QUE		Other Provinces		Total					
Year	U.S. Cons.	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
1996	49.9	16.5	33.0	1.3	3.0	17.8	35.7	0.4	1.0	18.2	36.5
1997	50.9	15.5	30.0	1.9	4.0	17.4	34.3	0.6	1.0	18.0	35.4
1998	52.2	15.8	30.0	2.3	4.0	18.1	34.6	0.6	1.0	18.7	35.8
1999	54.3	15.5	29.0	2.7	5.0	18.2	33.6	0.9	2.0	19.2	35.3
2000	53.9	15.4	28.0	2.9	5.0	18.3	34.0	1.1	2.0	19.4	36.1
2001	53.8	16.3	30.0	2.4	5.0	18.7	34.7	1.4	3.0	20.1	37.3
2002	56.7	16.8	30.0	2.2	4.0	19.1	33.5	1.9	4.0	20.5	37.0

Volume in billion board feet
May not add due to rounding

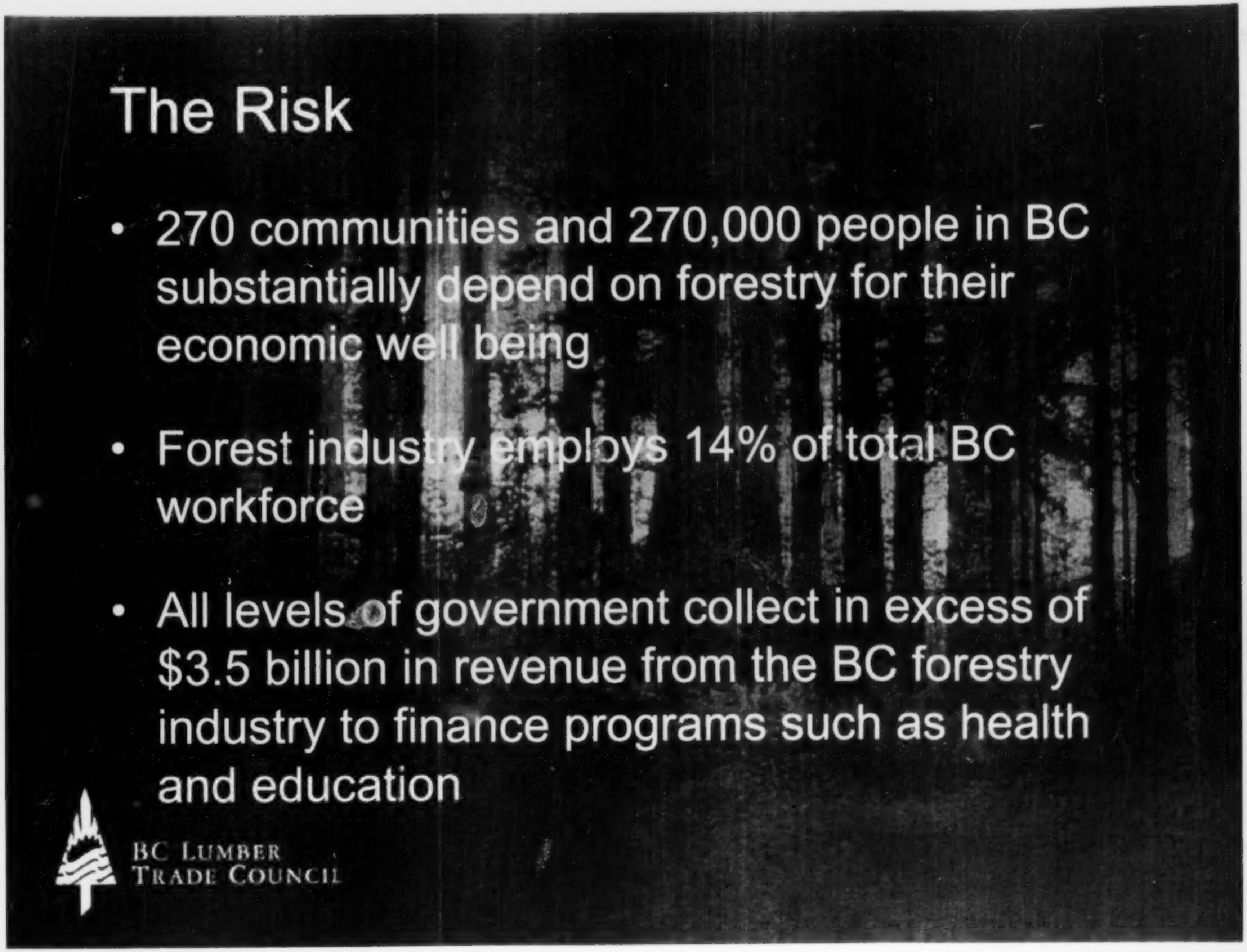
BC LUMBER
TRADE COUNCIL

US Softwood Lumber Consumption Held by Imports

		Canada						Other Countries		Total	
		BC, AB, ON, QUE		Other Provinces		Total					
Year	U.S. Cons.	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
1996	49.9	16.5	[illegible]	1.3	3.0	17.8	35.7	0.4	1.0	18.2	36.5
1997	50.9	15.5	[illegible]	1.9	4.0	17.4	[illegible]	0.6	1.0	18.0	35.4
1998	52.2	15.8	[illegible]	2.3	4.0	18.1	34.6	0.6	1.0	18.7	35.8
1999	54.3	15.5	29.0	2.7	5.0	18.2	33.6	0.9	2.0	19.2	35.3
2000	53.9	15.4	28.0	2.9	5.0	18.3	34.0	1.1	2.0	19.4	36.1
2001	53.8	16.3	30.0	2.4	5.0	18.7	34.7	1.4	3.0	20.1	37.3
2002	56.7	16.8	30.0	2.2	4.0	19.1	33.5	1.9	4.0	20.5	37.0

Volume in billion board feet
May not add due to rounding

BC LUMBER
TRADE COUNCIL



The Risk

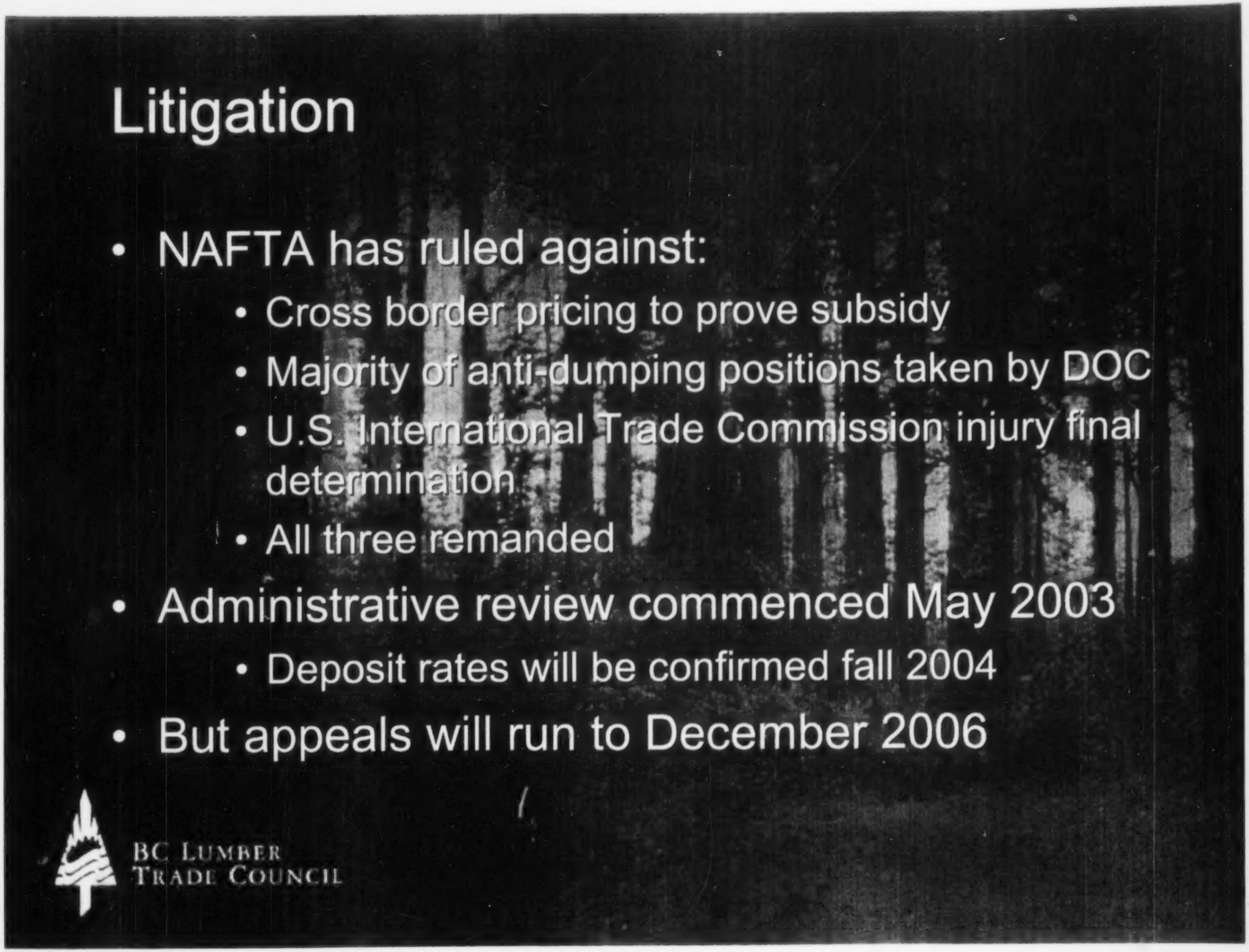
- 270 communities and 270,000 people in BC substantially depend on forestry for their economic well being
- Forest industry employs 14% of total BC workforce
- All levels of government collect in excess of $3.5 billion in revenue from the BC forestry industry to finance programs such as health and education

BC Lumber
Trade Council

Litigation

- Canada has 6 appeals before and WTO and NAFTA
- WTO has ruled against:
  - Byrd Amendment
  - Export controls as a subsidy
  - Cross border pricing to prove subsidy
- WTO ruling on anti-dumping (Nov/03) and injury (Jan/04)

BC LUMBER
TRADE COUNCIL



Litigation

- NAFTA has ruled against:
  - Cross border pricing to prove subsidy
  - Majority of anti-dumping positions taken by DOC
  - U.S. International Trade Commission injury final determination
  - All three remanded
- Administrative review commenced May 2003
  - Deposit rates will be confirmed fall 2004
- But appeals will run to December 2006

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Litigation

- Litigation could take through 2007 to fully complete
- Uncertainty continues for workers and communities
- Incredible expense to fight through litigation
- No guarantees that the US will heed WTO or NAFTA decisions
- No guarantees that US will not launch Lumber V on the heels of any WTO or NAFTA decisions

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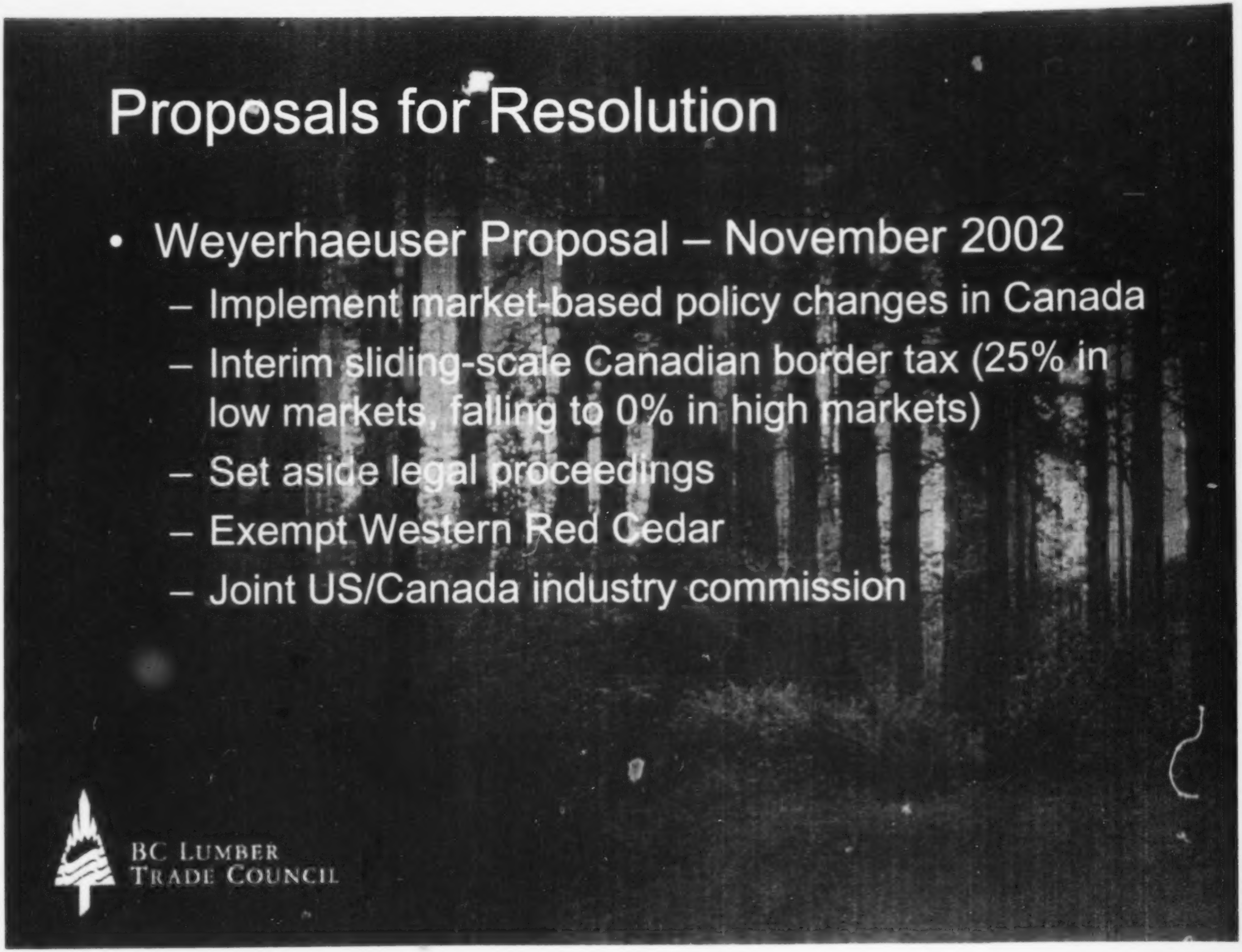
Draft Proposed Analytical Framework

- Grant Aldonas, Under Secretary of Trade, DOC
  - Met with BCLTC and BC government August 2002
- Released draft framework, January 2003, includes:
  - Market-based timber pricing
  - Auctions
  - Changed circumstances (policy bulletin)
  - Basis for long-term solution
- Released draft policy bulletin February 2003
- Initiated a return to negotiations late 2002

Why Negotiations?

- BCLTC has always advocated a two-track process of litigation and negotiation
- Canadian and US companies cannot withstand the impacts on the market until legal cases are resolved
- Canada and US are not guaranteed legal victories at the WTO or NAFTA
- Resolution is needed now to return stability to the NA lumber market, forestry workers and communities across Canada

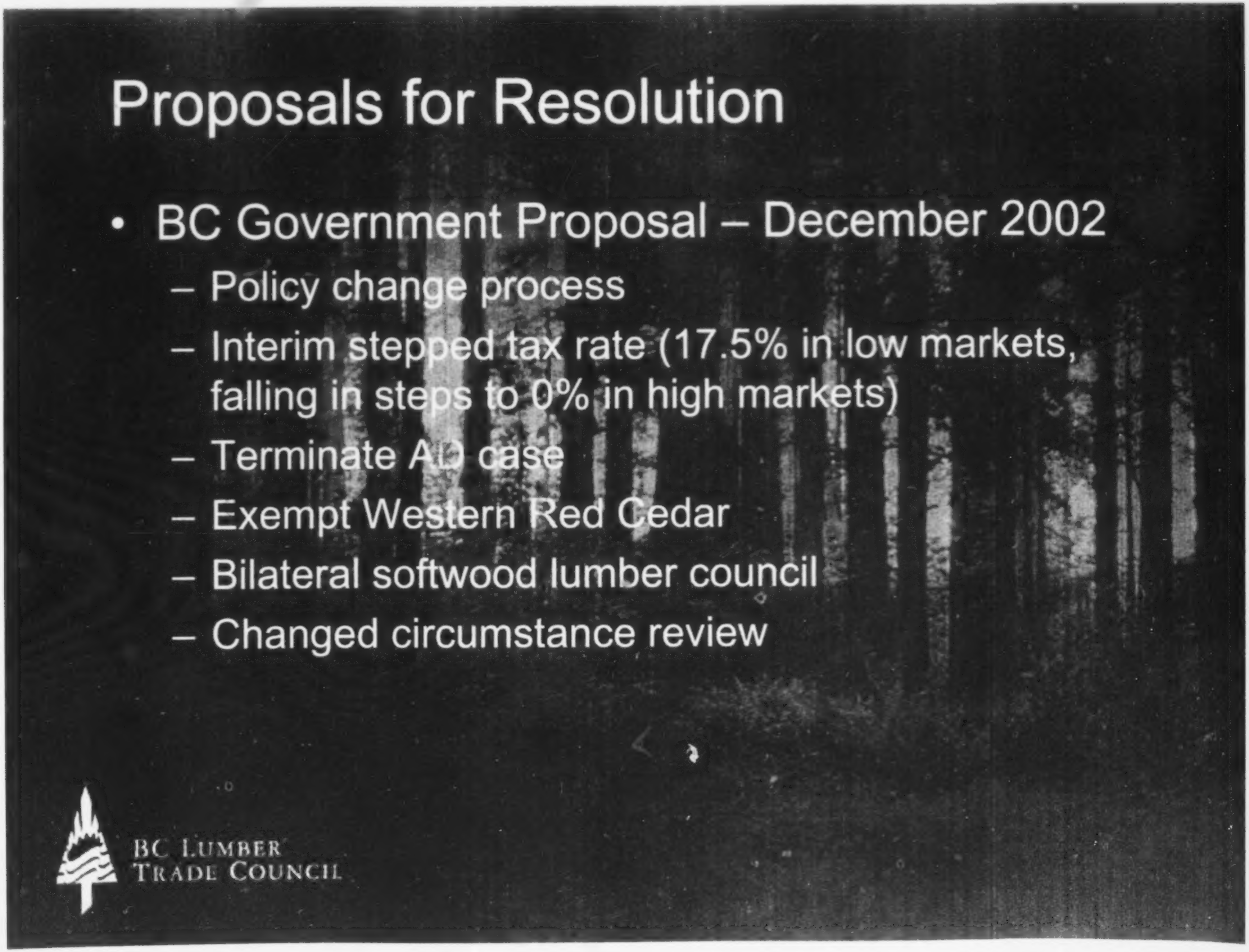
BC LUMBER
TRADE COUNCIL



Proposals for Resolution

- Weyerhaeuser Proposal – November 2002
  - Implement market-based policy changes in Canada
  - Interim sliding-scale Canadian border tax (25% in low markets, falling to 0% in high markets)
  - Set aside legal proceedings
  - Exempt Western Red Cedar
  - Joint US/Canada industry commission

BC LUMBER
TRADE COUNCIL



Proposals for Resolution

- BC Government Proposal – December 2002
  - Policy change process
  - Interim stepped tax rate (17.5% in low markets, falling in steps to 0% in high markets)
  - Terminate AD case
  - Exempt Western Red Cedar
  - Bilateral softwood lumber council
  - Changed circumstance review

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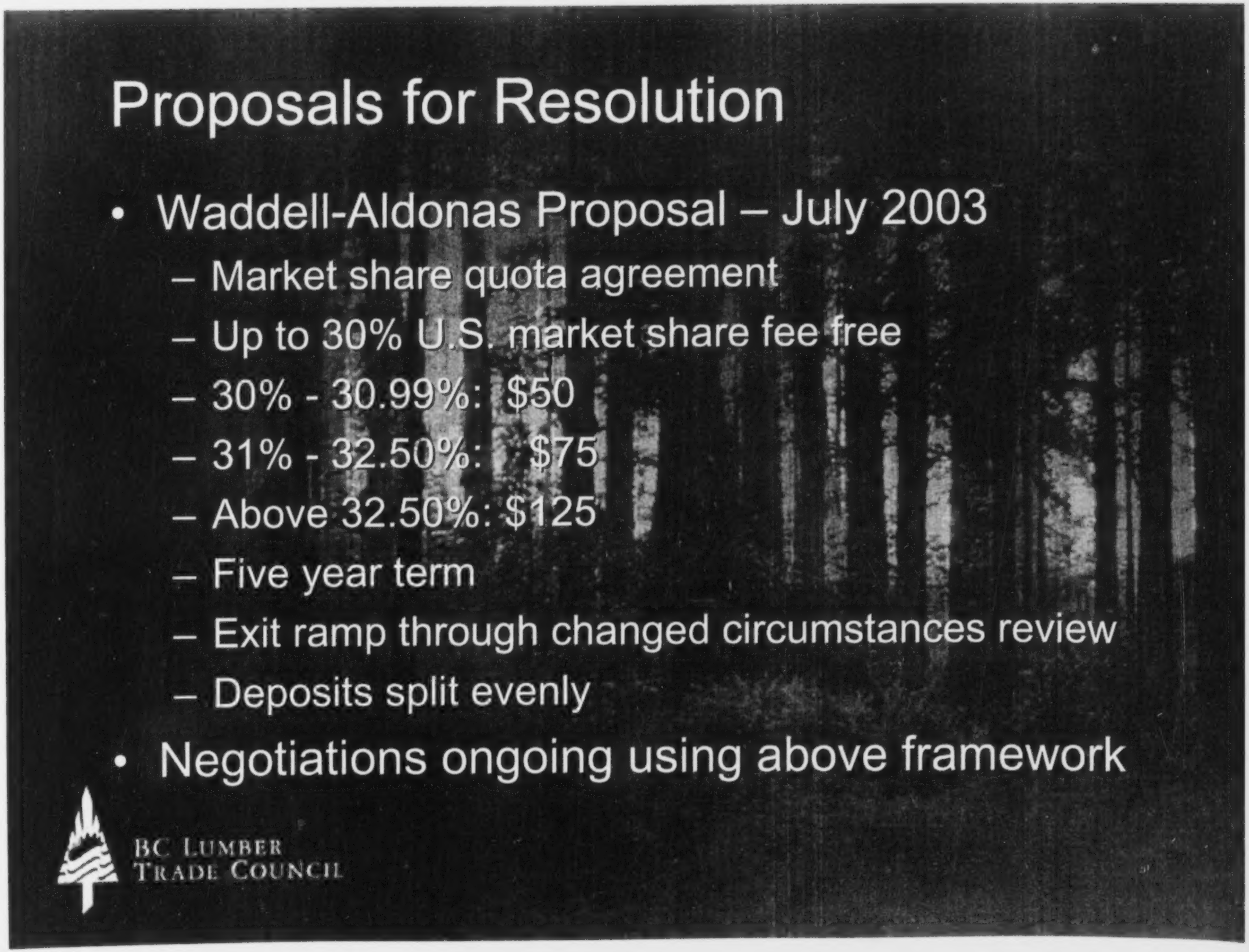
Proposals for Resolution

- Coalition of Fair Lumber Imports Proposal – February 2003
  - Low-market tax of up to 50%
  - Mid-market tax 15% - 18.8%
  - High-market tax 10% - 12.5%
  - Stop litigation
  - Disburse cash deposits to Coalition to compensate for litigation and injury
  - Joint industry commission, non-binding

BC LUMBER
TRADE COUNCIL



Proposals for Resolution

- Waddell-Aldonas Proposal – July 2003
  - Market share quota agreement
  - Up to 30% U.S. market share fee free
  - 30% - 30.99%: $50
  - 31% - 32.50%: $75
  - Above 32.50%: $125
  - Five year term
  - Exit ramp through changed circumstances review
  - Deposits split evenly
- Negotiations ongoing using above framework

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Summing Up

- Our goal must continue to be a long-term, durable, free trade solution
- We urge the Canadian Government to continue its pursuit for long-term free trade between Canada and the US
- As one of the largest trading disputes in the world, the importance of finding a solution is critical for the Canada-US relationship

BC LUMBER
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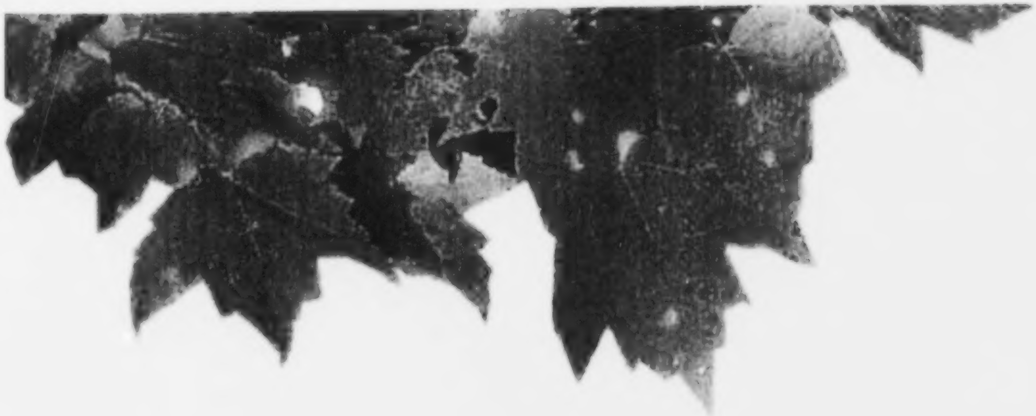
Overview to the Mountain Pine Beetle Initiative

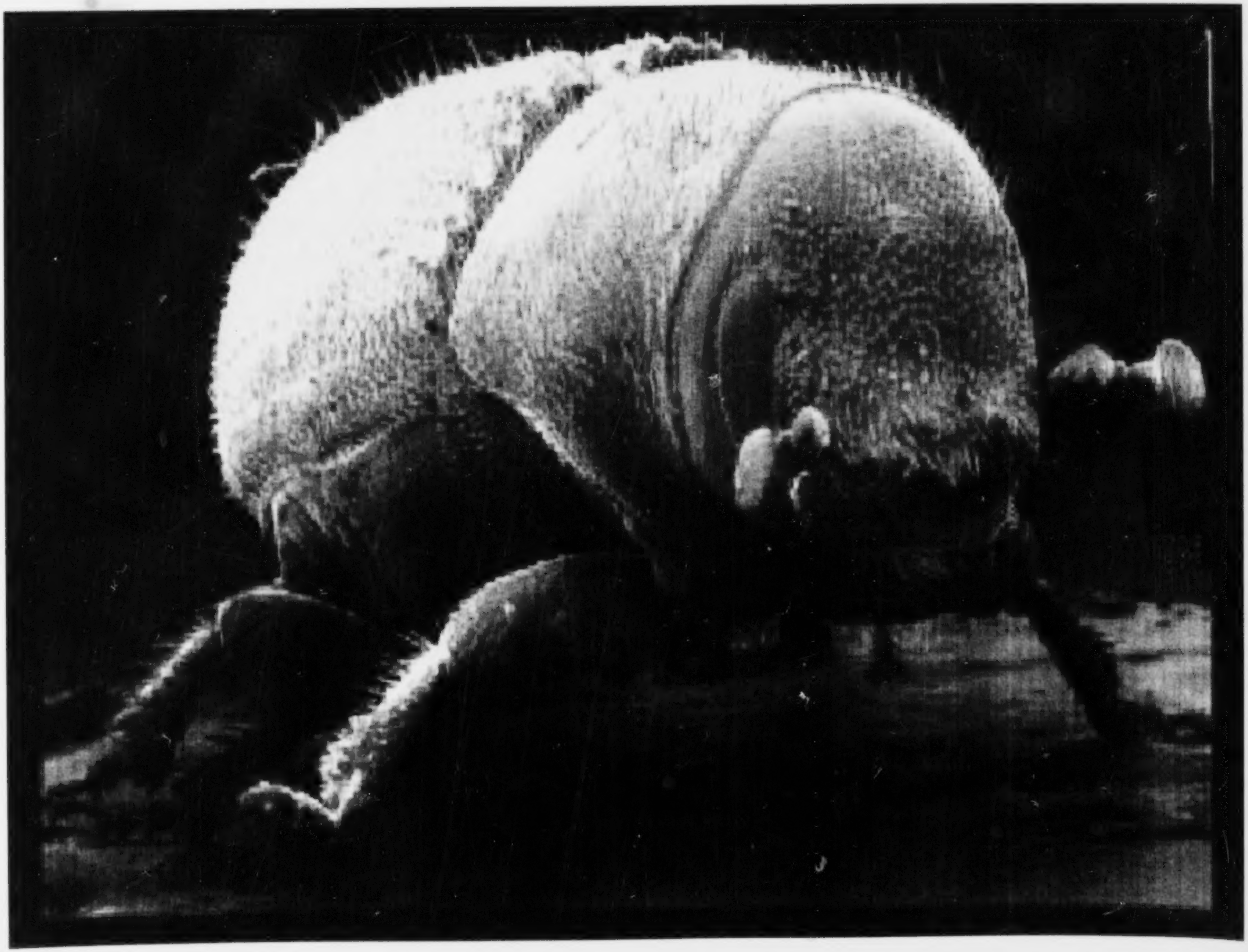
Dr. Bill Wilson

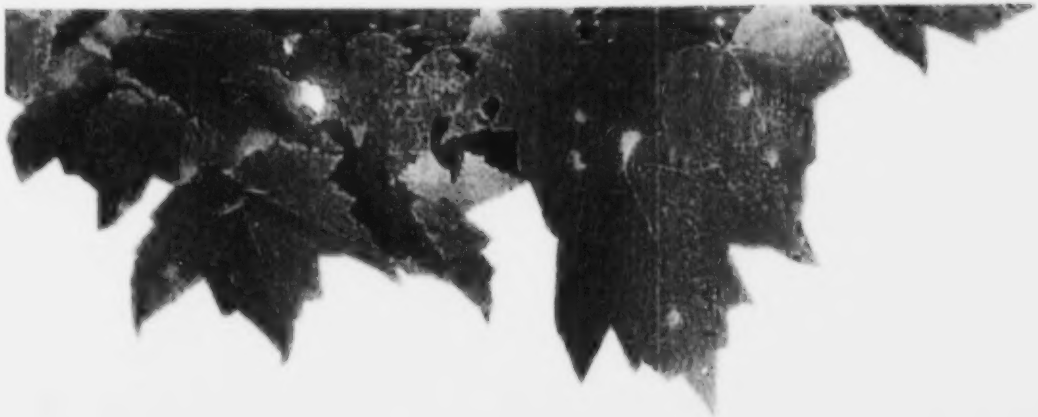
Canadian Forest Service



Outline

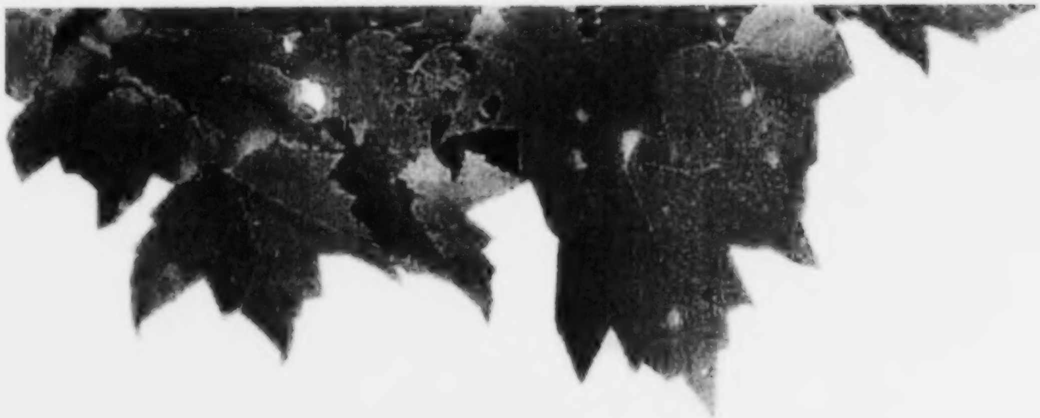
- Character & significance of epidemic
- Contributing factors
- Impacts
- Response options
- Conclusions





Epidemic Factors

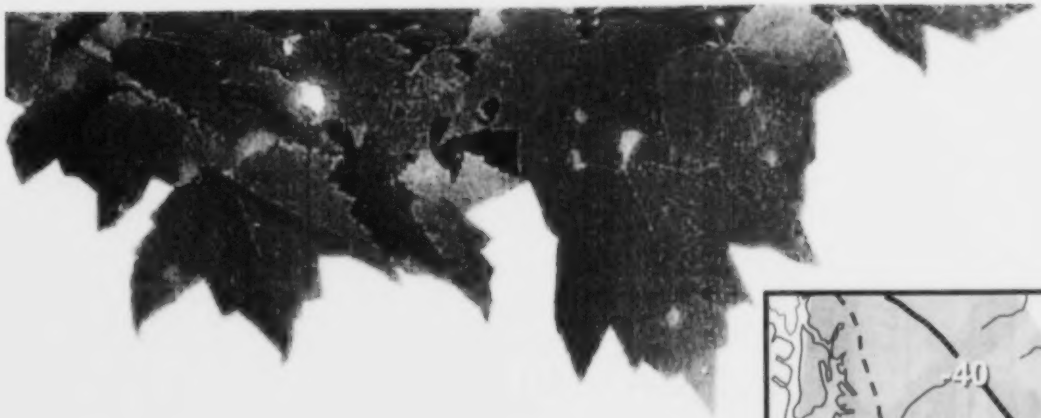
- hot, dry summers & mild winters
- abundant food source due to 40 years of fire suppression
- lack of early management
- inaccessible hot spots



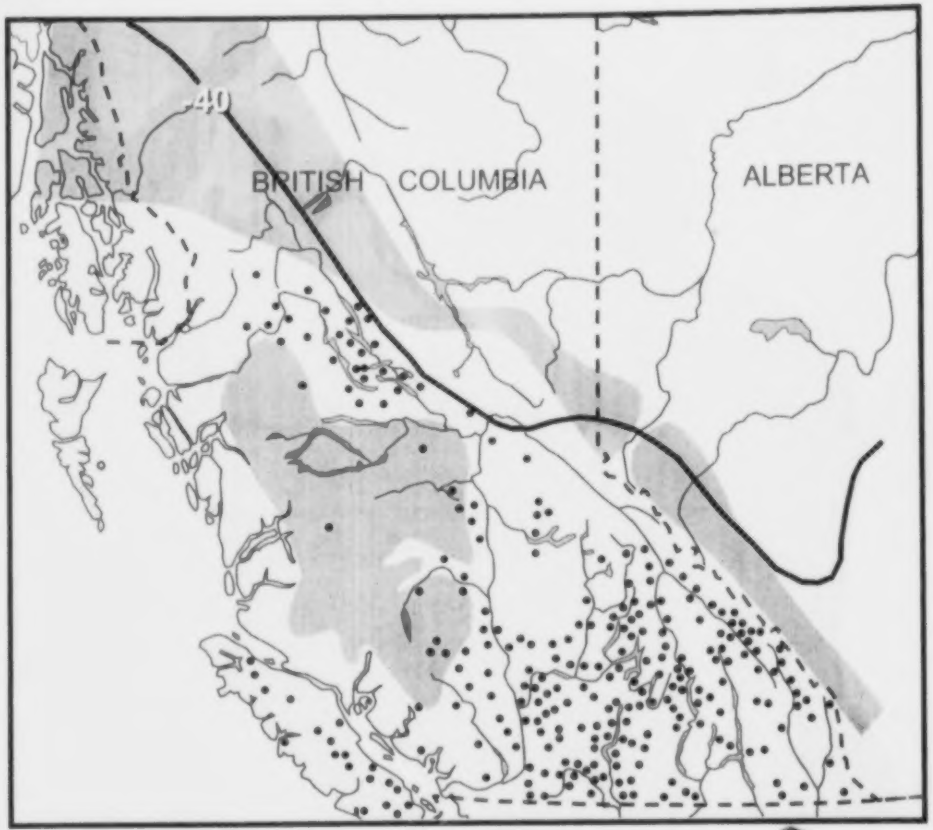
PI & MPB Risk

Years	MPB Risk Factor
</= 60	0.1
61 – 80	0.6
>/= 81	1.0

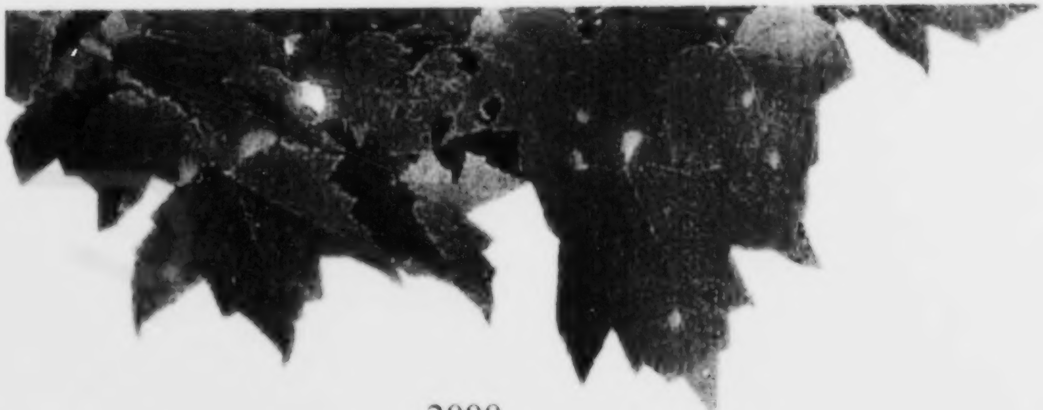
Source: Shore & Safranyik, CFS

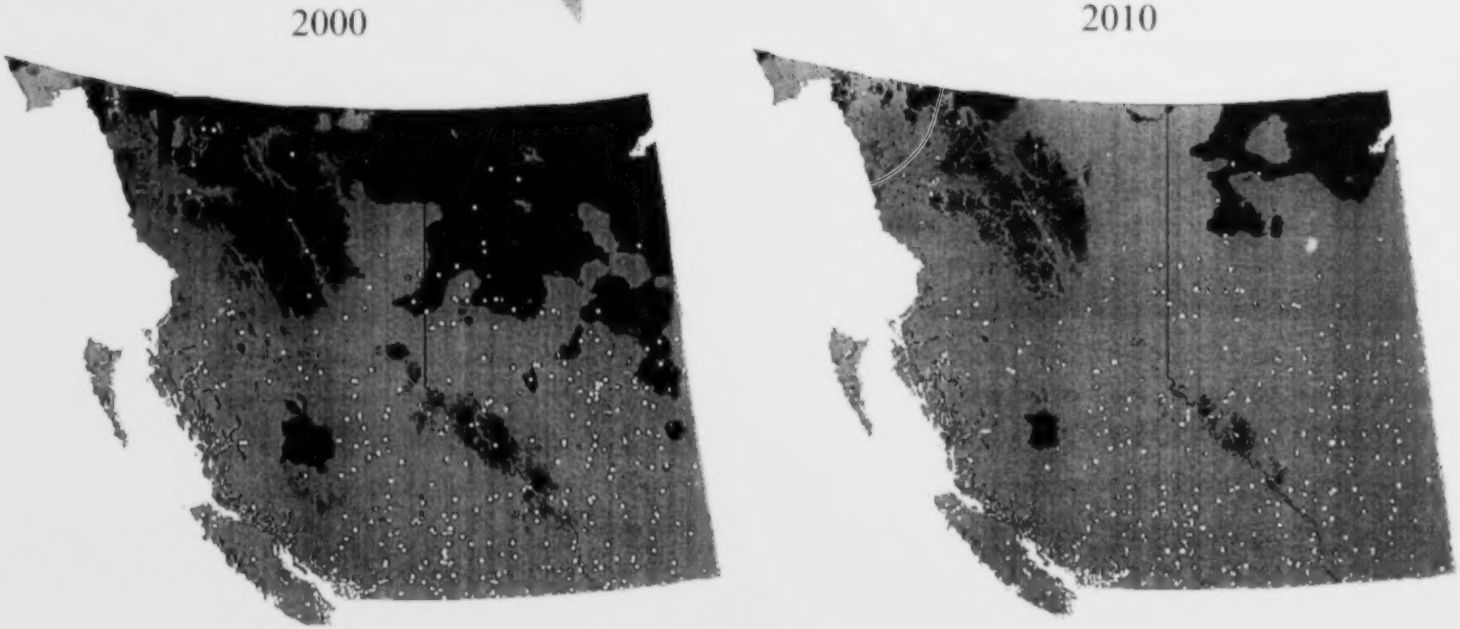


MPB – historical limits


-40
BRITISH COLUMBIA
ALBERTA

- Cool summers
- Winter minimums (below -40°C)





From: Régnière J, Logan JA, Carroll AL, Safranyik L. 2003. Phenological modeling of climate change impacts on North American forest insects. *Unpublished*

- ■ Minimum temperatures ≤ -40°C
- ▨ Minimum temperatures > -40°C
- ○ Normal-generating weather stations

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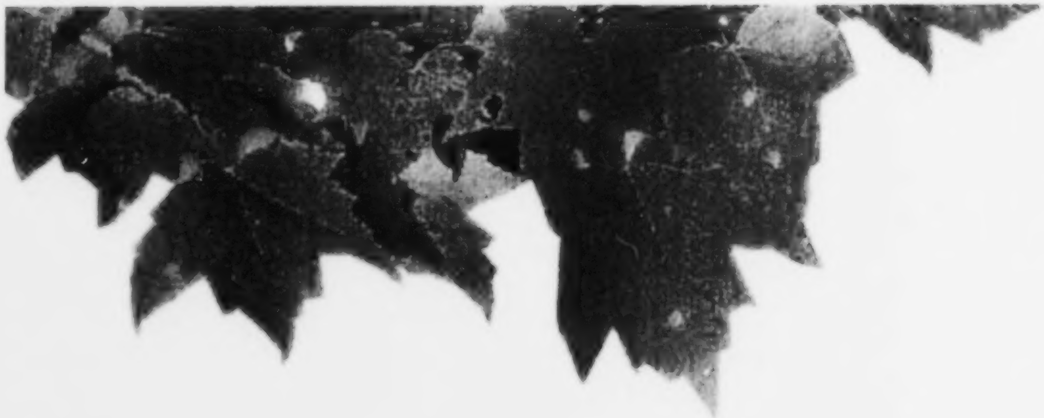
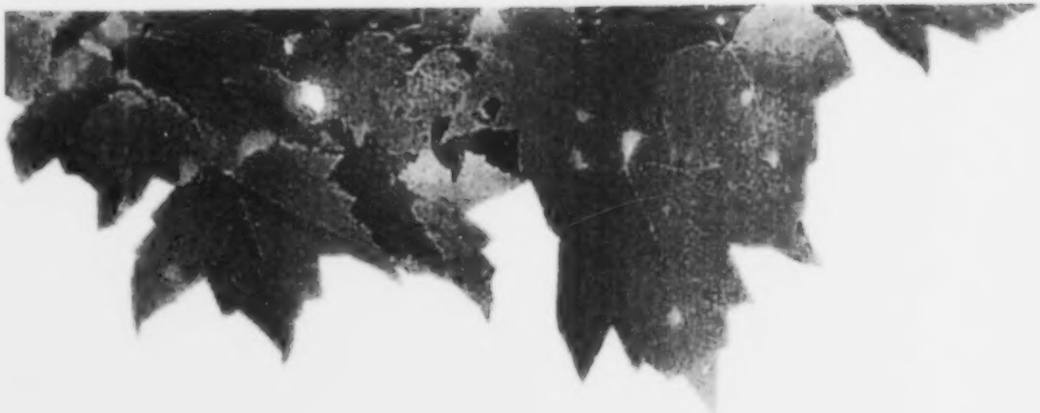
Impacts

- 1 billion cum mature PI vulnerable
- forest dependent communities
- forest ecosystems

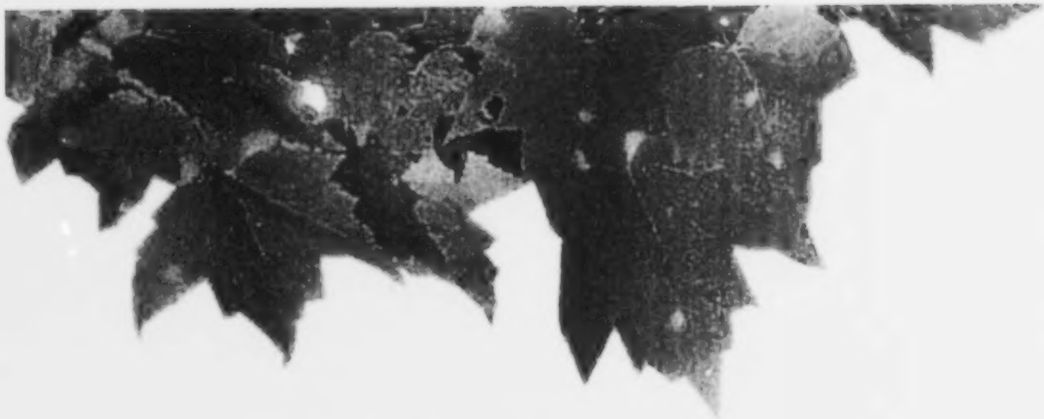


- AAC's reflect beetle salvage
- lumber markets in over-supply
- bluestain lumber
- road infrastructure
- regional milling capacity is adequate



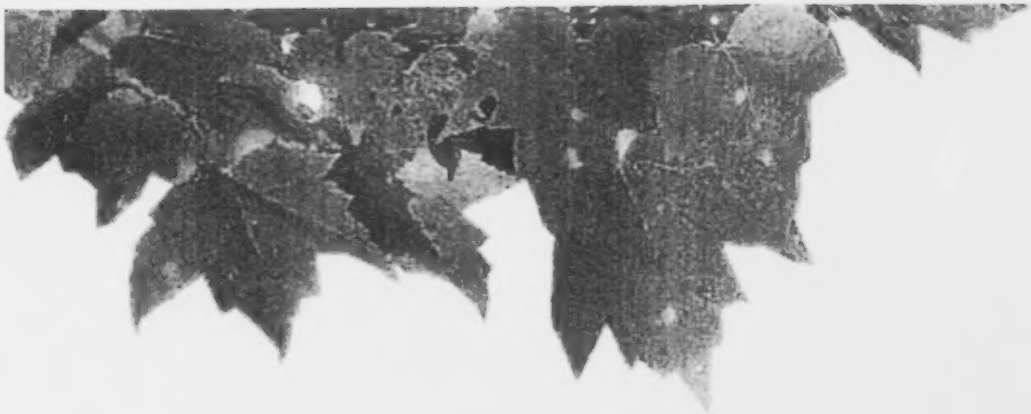
Federal MPB Initiative

- Partnered with BC Forest Service
- Announced on October 8, 2002
- Five years
- $40 million



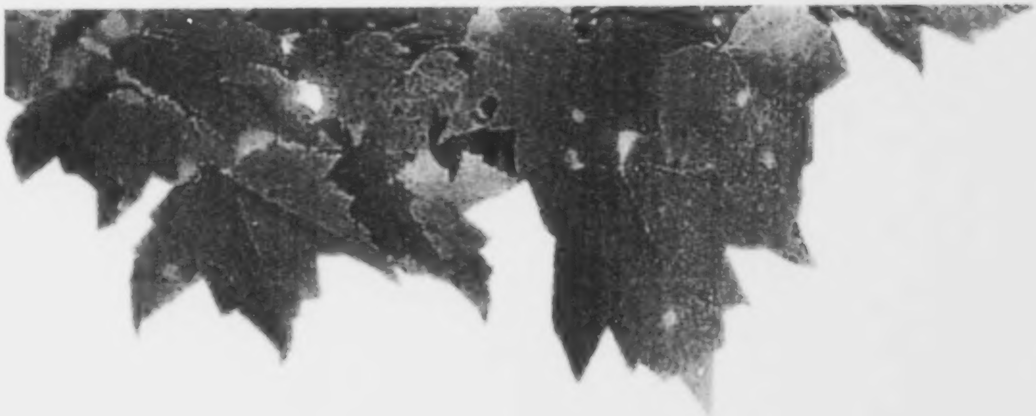
MPBI Programs

- Programs
  - Federal forestlands rehabilitation
  - Private forestlands rehabilitation
  - Risk reduction & value recovery R&D



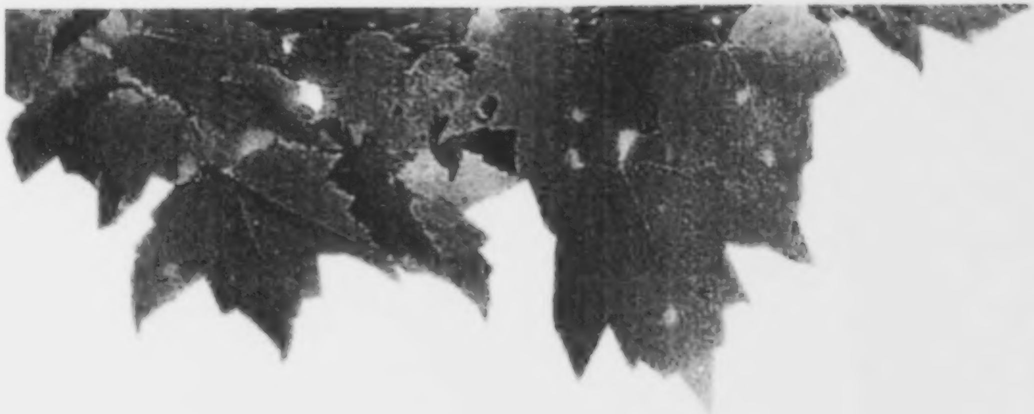
Forestlands & ecosystems

- Integrating beetle risk into forestland management & determining the character of post-beetle forest ecosystems.



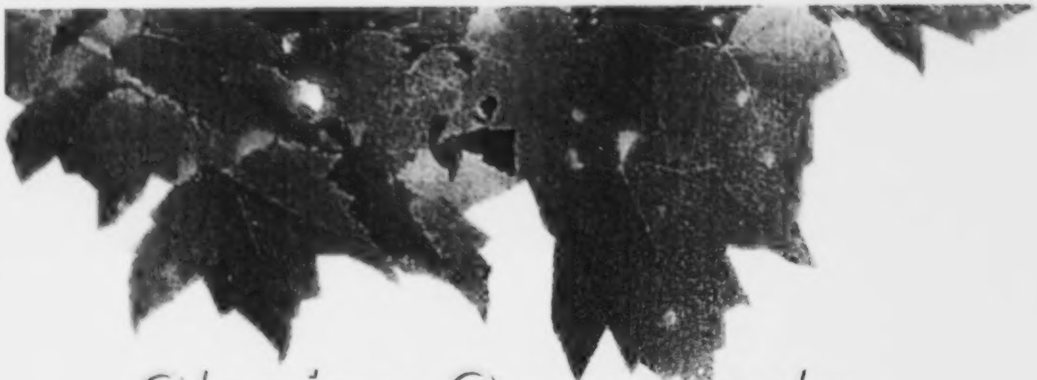
Harvesting & Processing

- Focus is on impacts of beetle-kill on timber quality, the shelf-life of 'grey attack', and on the economic and socio-economic impacts.



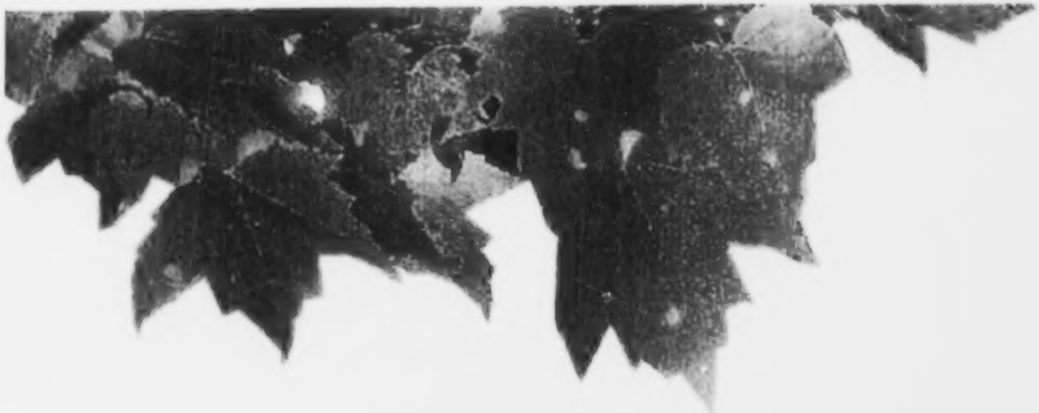
Markets & Products

- Focus is on providing information on beetle zone product performance and assessing potential product and market options.



Closing Comments

- outbreak at year 8-10 of 12-13 year cycle
- w/o cold weather events infestation will continue
- control new outbreaks & other bark beetles
- social impacts are medium-long term
- market demand is constraint not processing capacity
- Analysis & planning will reduce adjustment costs



http://mpb.cfs.nrcan.gc.ca

Natural Resources Canada
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Canada

Check against delivery

Address to Mountain Pine Beetle Symposium – Quesnel Nov. 21, 2003

by Roy Nagel, General Manager, Central Interior Logging Association

We -- government, communities and all sectors of the forest industry -- face two challenges in trying to address the problems created by this pine beetle infestation.

We need to determine approaches and procedures that will work best for all of us in areas of forest health, short and long-term community stability, best economic return, and most efficient marketing and use of the beetle-damaged and green attack timber.

And we need to build the system to do all of the above.

I don't know which job is tougher.

I DO know – as does everyone in this room -- that it will take the full commitment of all stakeholders and an exceedingly high level of co-ordination and co-operation between government, communities and all industry sectors if we are to have any degree of success at all.

I'm here mostly to talk about how to expand and fine-tune the system -- the machinery -- needed to harvest and haul the huge amount of beetle-infested pine we see around us. Others have talked and will talk about manufacturing and marketing issues.

I'll also talk for a minute about the approach, because that will, to a large degree, determine how the system must be structured.

So . . . what do we need to do to ensure these massive amounts of timber can be harvested and delivered to mills and other users? The flip side of that question is -- What things get in the way of doing that job effectively?

It's really very simple to list the things that can be done relatively quickly and easily to help the logging and hauling effort be successful

- Expand both the logging and hauling seasons
- Ensure the road structure -- and maintenance -- is adequate for safe movement of logging trucks AND for other road users.
- Involve the logging and log-hauling sectors in the planning process much earlier.

Everyone in this room is here because we share a commitment to develop a successful beetle management and timber inventory strategy. That means we have to get serious about addressing the things that can limit our success:

Fix Stumpage Bingo --end the current system of adjusting stumpage rates quarterly.

Why? Because the system has some unintended consequences. It causes mills to time their log deliveries -- stopping and then restarting log-hauling activities -- to take advantage of lower stumpage rate periods.

The consequences have been severe to the log-hauling sector

Over the past five years or so, it has reduced log-hauling to between 110 to 125 days a year in this region, compared with 170 to 190 days a year previously.

That's a 30 to 35% loss of hauling days – and we need them back if we're to deliver increased volumes of beetle wood.

It is ironic that while forest companies ramp up to three shifts a day in mills to lower unit costs for greater efficiency, logging and trucking contractors are having to buy higher-capacity equipment and bigger trucks that are used for fewer days a year.

There's another big reason to end Stumpage Bingo – safety.

Compressed log-delivery periods put more truckers on the roads at peak hauling times, and many of those truckers are brought in from elsewhere. Some aren't familiar with the road network, road maintenance becomes a bigger issue, longer hours dull reaction times. . . . . and accidents happen.

Many of these roads aren't just used by loggers – they're also routes for fuel transport, chip-hauling, movement of logging equipment and supplies, school buses and the motoring public.

They need to be safe – and if policies and procedures make them less safe, that needs to be addressed.

We also need to co-ordinate road use

We – log-haulers, licensees and government -- need to identify major log-hauling routes and plan ways to control traffic flow more efficiently and more safely. Many of the roads in this area -- Blackwater, Nazko and others – are multiple-use roads, and that should ring some alarm bells.

Some work has already been done in this area, but we have to get the Ministry of Forests, the Ministry of Transportation, the Pine Beetle Initiative people and road-user groups connected on a continuous basis to develop priorities, set safety standards and monitor progress on how to move more logs, fuel, chips, equipment – and people – as safely as possible on roads across the region.

It is no coincidence that the government task force on safety in the forest industry has consistently heard about log-hauling accidents and Stumpage Bingo in its meetings across the Interior in recent weeks.

And. . .we need to co-ordinate logging activities more efficiently

- Let's find ways to shorten the time lag between identifying green attack areas and logging them. Get the planning done more quickly -- but take that little bit of time to lay it out for most efficient logging and hauling.
- At the Ministry of Forests level, let's make sure those logging permits flow smoothly, and the Timber Sales of beetle wood are put up quickly, and are consistently and well-advertised.
- And over on the ICBC side, let's build a better, 24-hour-a-day system for issuing permits to move logging equipment to work sites.

The above are short-term issues, and if the commitment to succeed is there, they can and must be addressed.

Now, let's talk long-term issues.

The next time you're near a truck stop, a weigh scale, a tire shop or a logging equipment dealership, go in and look at the customers. You'll see a lot of grey hair.

Why?
Because this sector – logging and hauling – is aging. More than half of the loggers and two-thirds of the truckers are in their mid-fifties or older.

We're not attracting new people into these businesses quickly enough to replace the entrepreneurs and operators who are leaving.

We're losing qualified machine operators and truck drivers to other industries such as gas and oil, or into retirement. If fact, unless something changes, we're facing a shortage of them.

Why?
An uncertain business climate . .. and I'm not just talking about tariffs and lumber prices.

If you want to encourage entrepreneurs to invest in logging and log-hauling instead of walking away from it, there has to be some degree of opportunity – competitive with other industries -- to make a profit.

And there has to be enough operational stability – predictable logging and hauling volumes – to keep people coming back to do business next year and the year after.

Or else -- money walks.

In our case, some of it is walking away from our sector – to more stable business environments, or to greater opportunities to make profits.
And as I just said, the same goes for operators and drivers.

I'll leave this point with a question:

Do government policies and forest company initiatives attract or discourage investment and a flow of trained, skilled workers into the log-harvest sector?

We won't fix this today, and there is no quick fix.
But we'd better think about how to address these long-term issues for the log-harvest sector if we want enough investment dollars and skilled people around, at the right price, to get this job done.

I said in the beginning that the way this timber is to be harvested will have a big impact on this sector.

A five-year bulge in harvest volumes followed by reductions in the cut will not encourage investment, and will challenge the capacity the sector has to harvest and haul it.

In a word, this is the issue for us: Capacity.

At the present time, and for the forseeable future unless these stability and opportunity issues are addressed, there is not and will not be the capacity on either the logging or the log-hauling sides of this sector to harvest and haul pine in amounts beyond the current AAC uplift levels.

On the other hand, a more-managed and steady flow of log inventory will be more easily-handled by the current contractor and subcontractor base.

I'll close with this one thought:

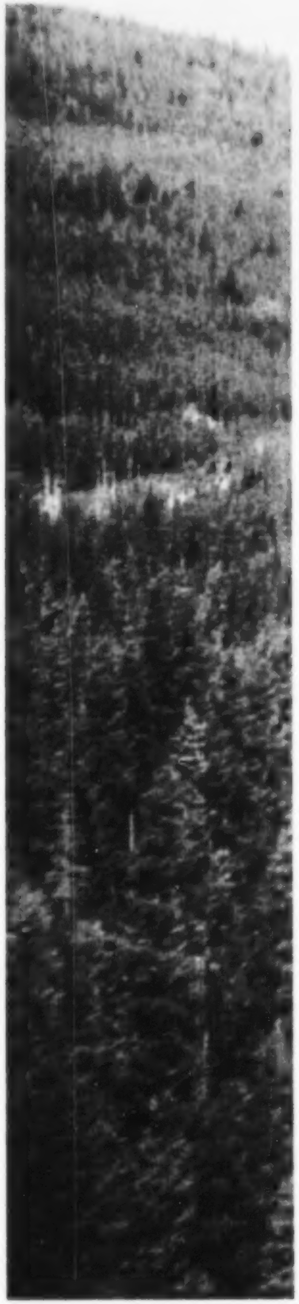
It is crucial – for the above reasons – that the log-harvest sector be fully and directly involved in the next phase of planning to deal with the pine beetle epidemic.

Thank you.

Nov 2003

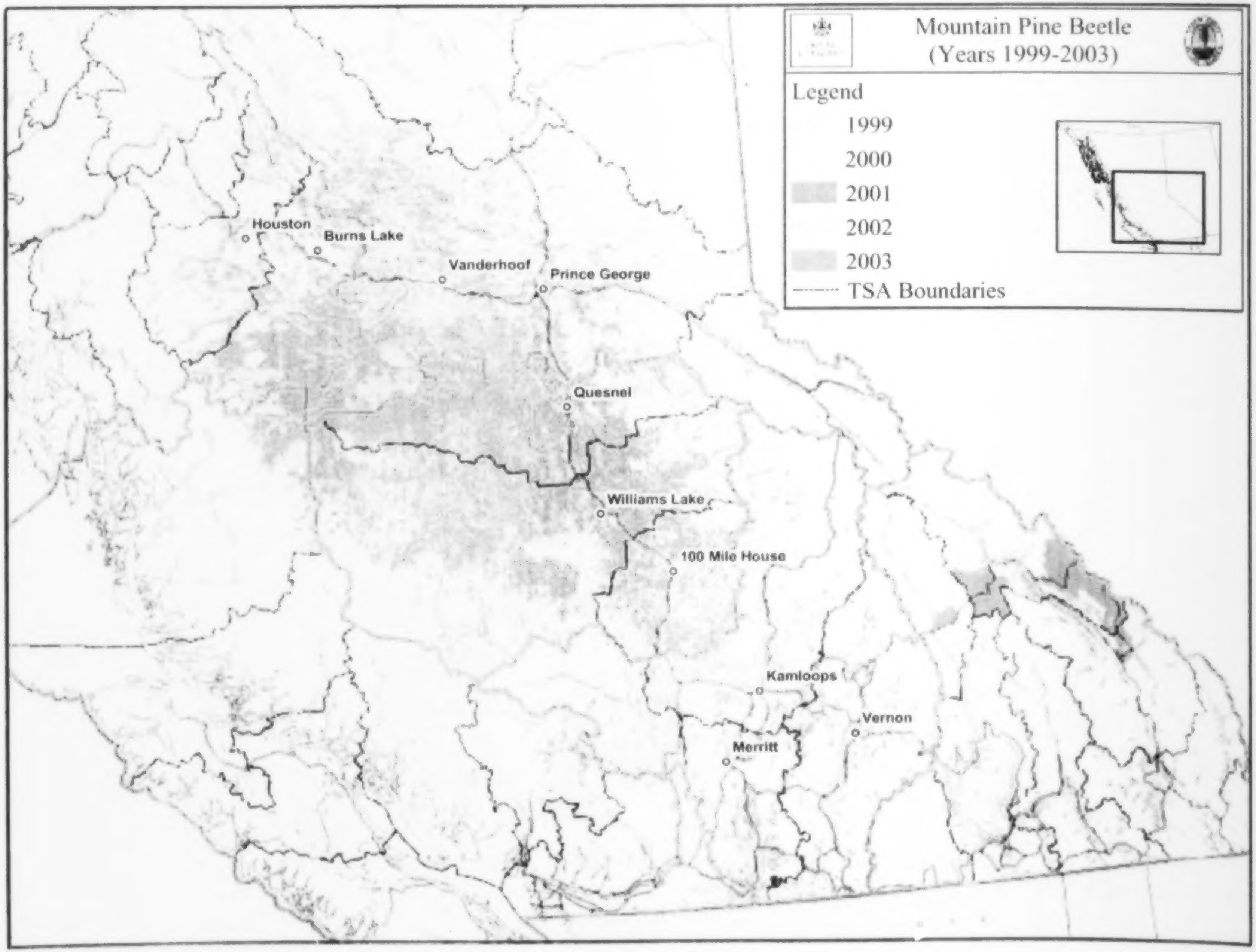
Mountain pine beetle epidemic in BC

From a Timber Supply Perspective



Outline

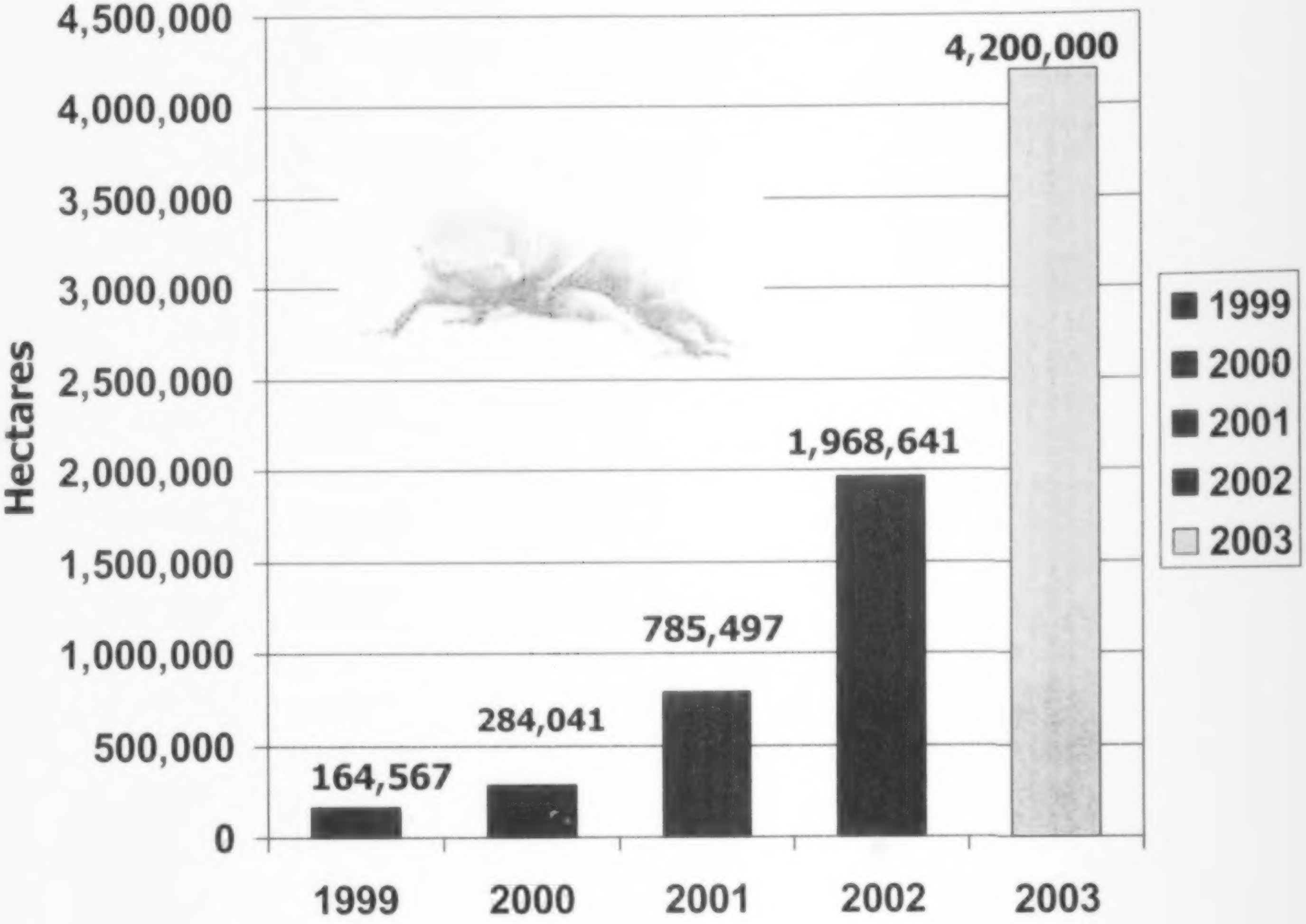
- the expanding MPB outbreak and 2 key influencing factors
- timber supply impacts in 12 severely infested units and in the Quesnel TSA
- challenges ahead ...



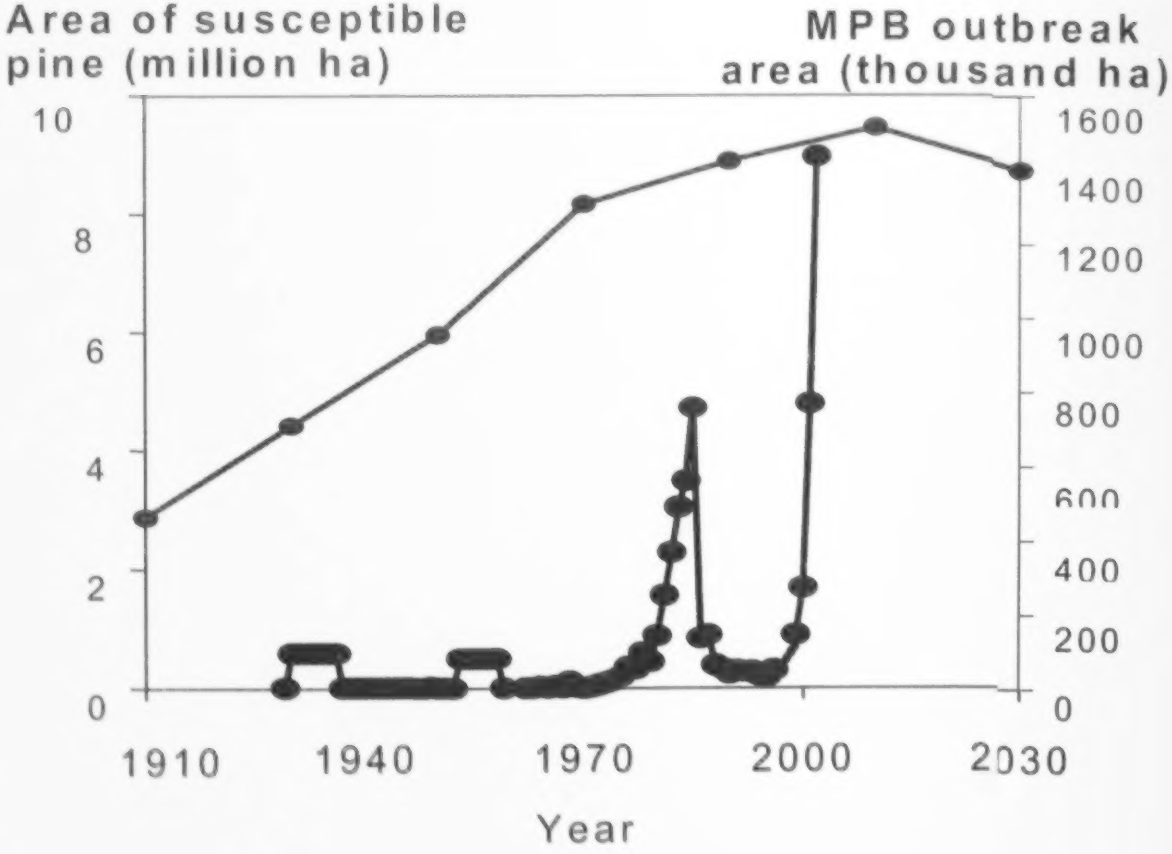
Mountain Pine Beetle
(Years 1999-2003)

Legend
1999
2000
2001
2002
2003
TSA Boundaries
Houston
Burns Lake
Vanderhoof
Prince George
Quesnel
Williams Lake
100 Mile House
Kamloops
Vernon
Merritt

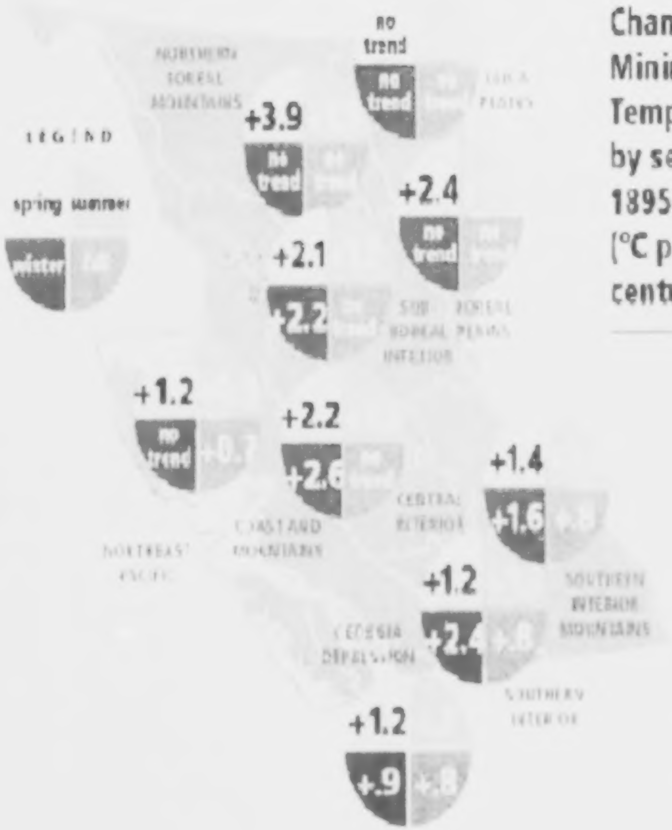
Annual red-attack



Area of pine & beetle outbreaks

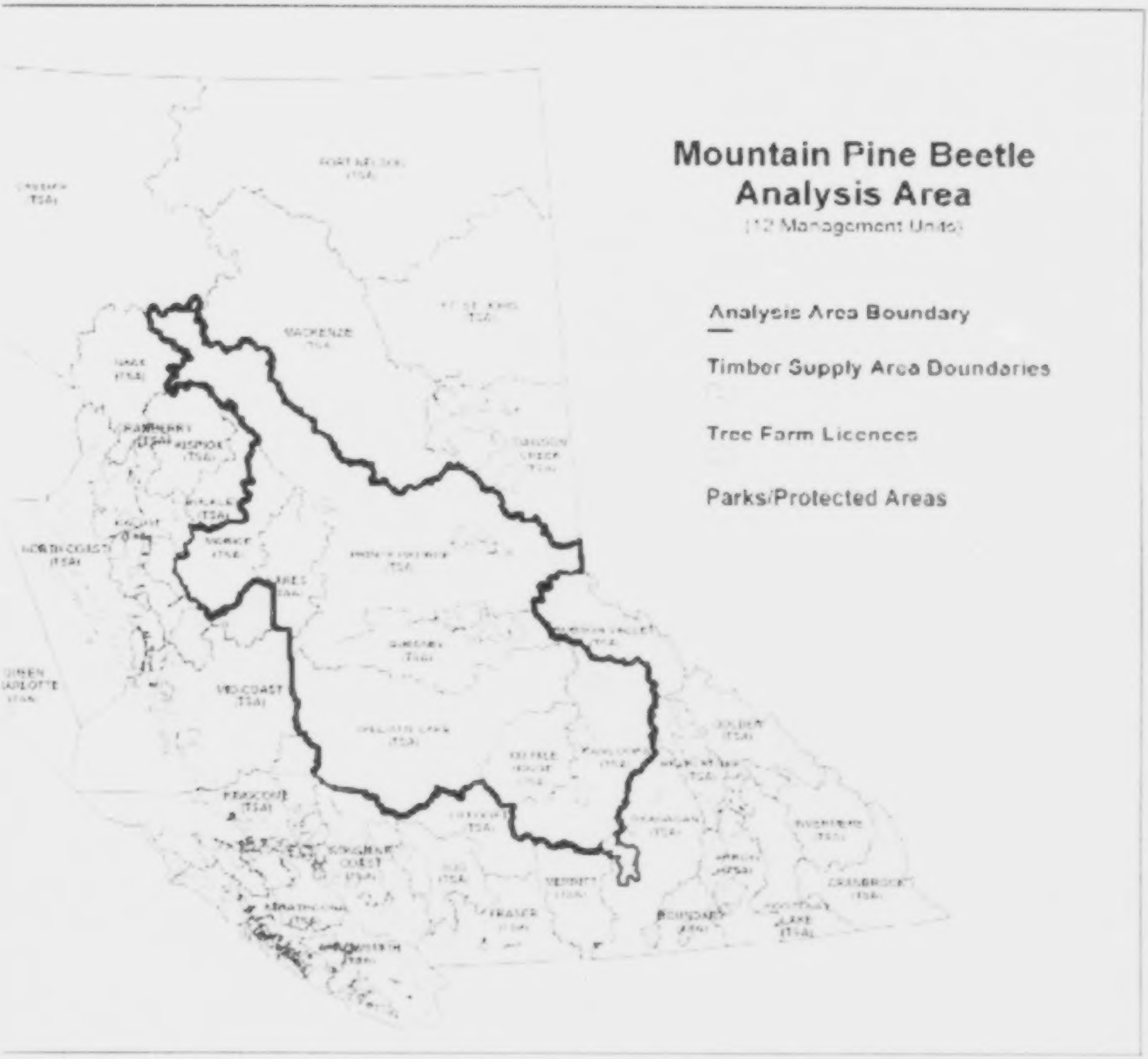


Climate


LEGEND
spring
summer
winter
no trend
no trend
NORTHERN BOREAL MOUNTAINS
+3.9
no trend
PLAINS
+2.4
no trend
+2.1
+2.2
SUB BOREAL INTERIOR
BOREAL PLAINS
+1.2
no trend
+0.7
+2.2
+2.6
CENTRAL INTERIOR
+1.4
+1.6
COAST AND MOUNTAINS
NORTHEAST PACIFIC
+1.2
+2.4
+.8
SOUTHERN INTERIOR MOUNTAINS
GEORGIA DEPRESSION
SOUTHERN INTERIOR
+1.2
+.9
+.8

Change in Minimum Temperature by season, 1895-1995 (°C per century)

Warmer climate conditions have expanded the beetle range into previously unsuitable areas such as northern areas and higher elevations



Mountain Pine Beetle Analysis Area

(12 Management Units)

Analysis Area Boundary

Timber Supply Area Boundaries

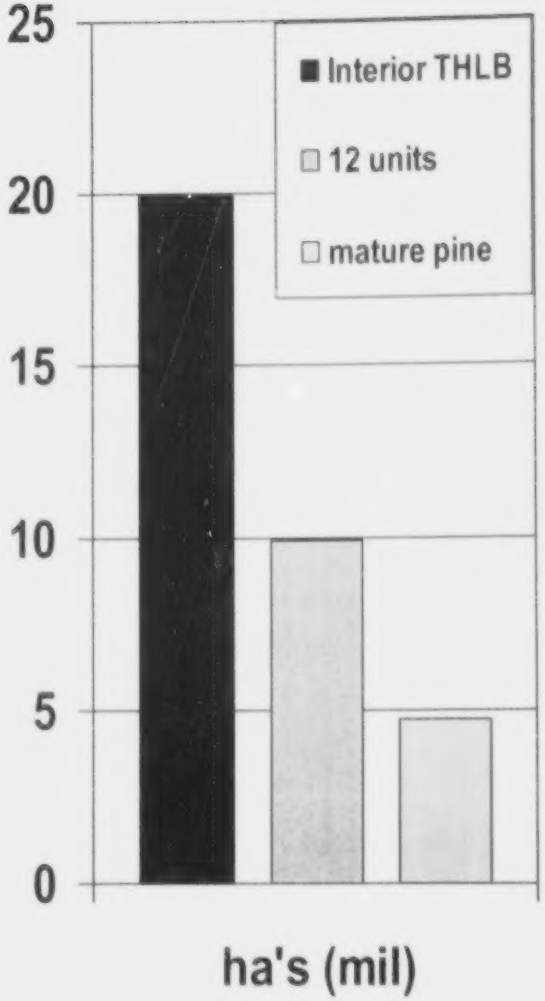
Tree Farm Licences

Parks/Protected Areas

CASSIAR (TSA)
FORT NELSON (TSA)
FT. ST. JOHN (TSA)
MACKENZIE (TSA)
NASS (TSA)
CRANBERRY (TSA)
KISPIOX (TSA)
DAWSON CREEK (TSA)
BULKLEY (TSA)
KALUM (TSA)
NORTH COAST (TSA)
MORICE (TSA)
PRINCE GEORGE (TSA)
LAKES (TSA)
ROBSON VALLEY (TSA)
QUESNEL (TSA)
QUEEN CHARLOTTE (TSA)
MID COAST (TSA)
WILLIAMS LAKE (TSA)
GOLDEN (TSA)
100 MILE HOUSE (TSA)
KAMLOOPS (TSA)
REVELSTOKE (TSA)
KINGCOME (TSA)
LILLOOET (TSA)
OKANAGAN (TSA)
INVERMERE (TSA)
SUNSHINE COAST (TSA)
ARROW (TSA)
SOO (TSA)
MERRITT (TSA)
CRANBROOK (TSA)
STRATHCONA (TSA)
FRASER (TSA)
BOUNDARY (TSA)
KOOTENAY LAKE (TSA)
ARROWSMITH (TSA)

BC's interior timber harvesting land base

- BC's interior = 20 mil. ha
- 12 units = 9.9 mil. ha
- Of this, mature (susceptible) pine covers about 4.7 mil. ha

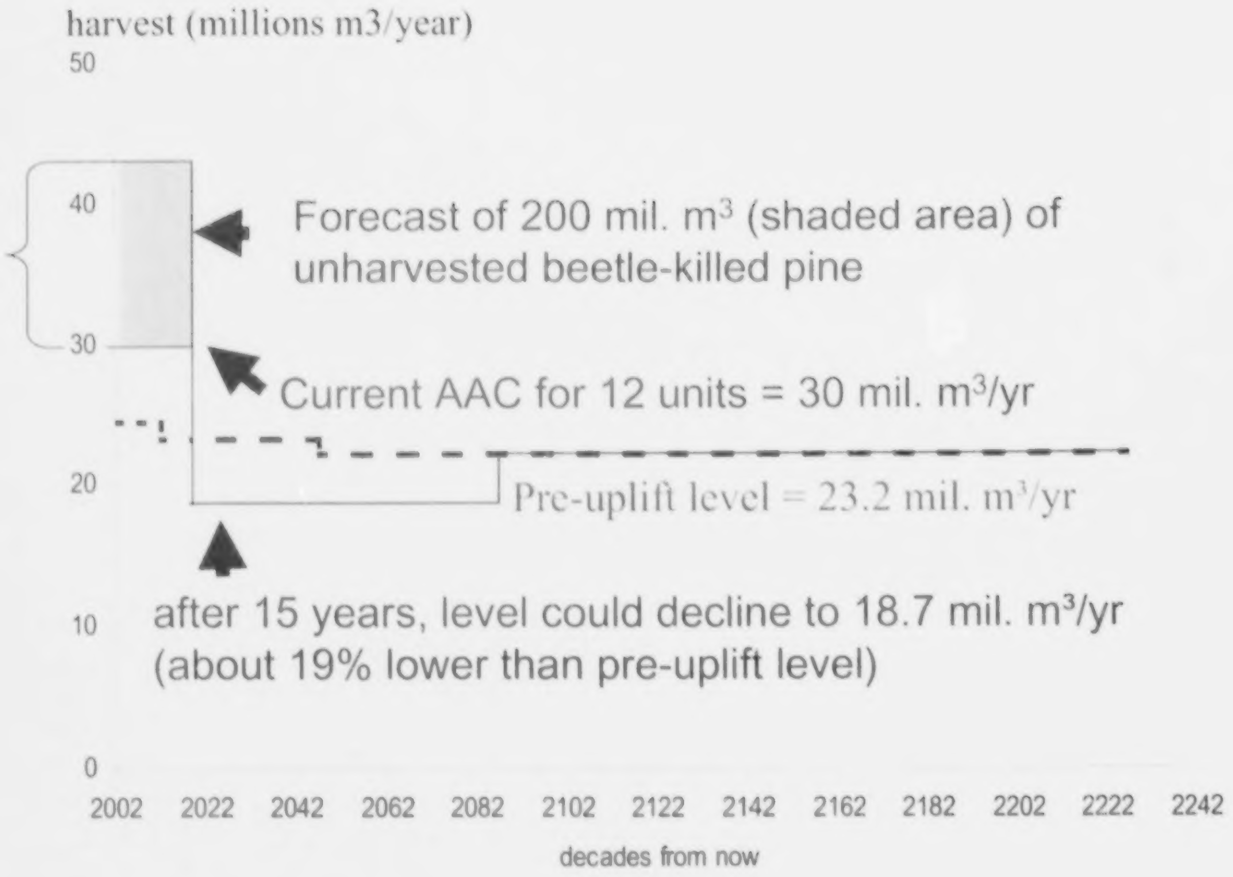


Key assumptions for analysis of 12 units

- Initial harvest rate was set at 30 mil m^3/yr, (includes 6.8 mil m3/yr increase for MPBs)
- Half of high-risk pine (>80 yrs & >50% Pl) = 1.6 mil ha was assumed to be fully attacked
- Depletion of pine after the shelf life (15 yrs)
- Over the first 15 years, harvesting consists of 60% pine and 40% other species

Projected impacts

12 Units



Forecast of 200 mil. m^3 (shaded area) of unharvested beetle-killed pine

Current AAC for 12 units = 30 mil. m^3/yr

Pre-uplift level = 23.2 mil. m^3/yr

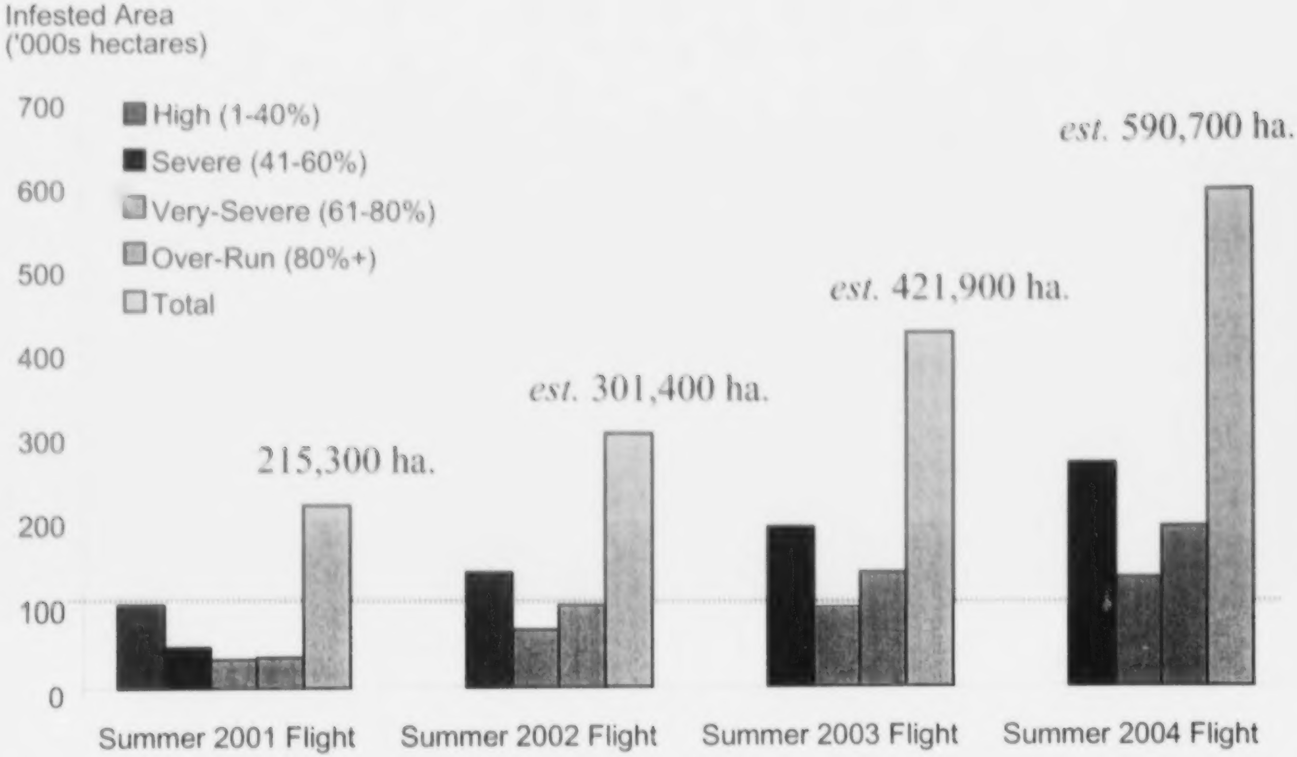
after 15 years, level could decline to 18.7 mil. m^3/yr (about 19% lower than pre-uplift level)

Quesnel TSA analysis

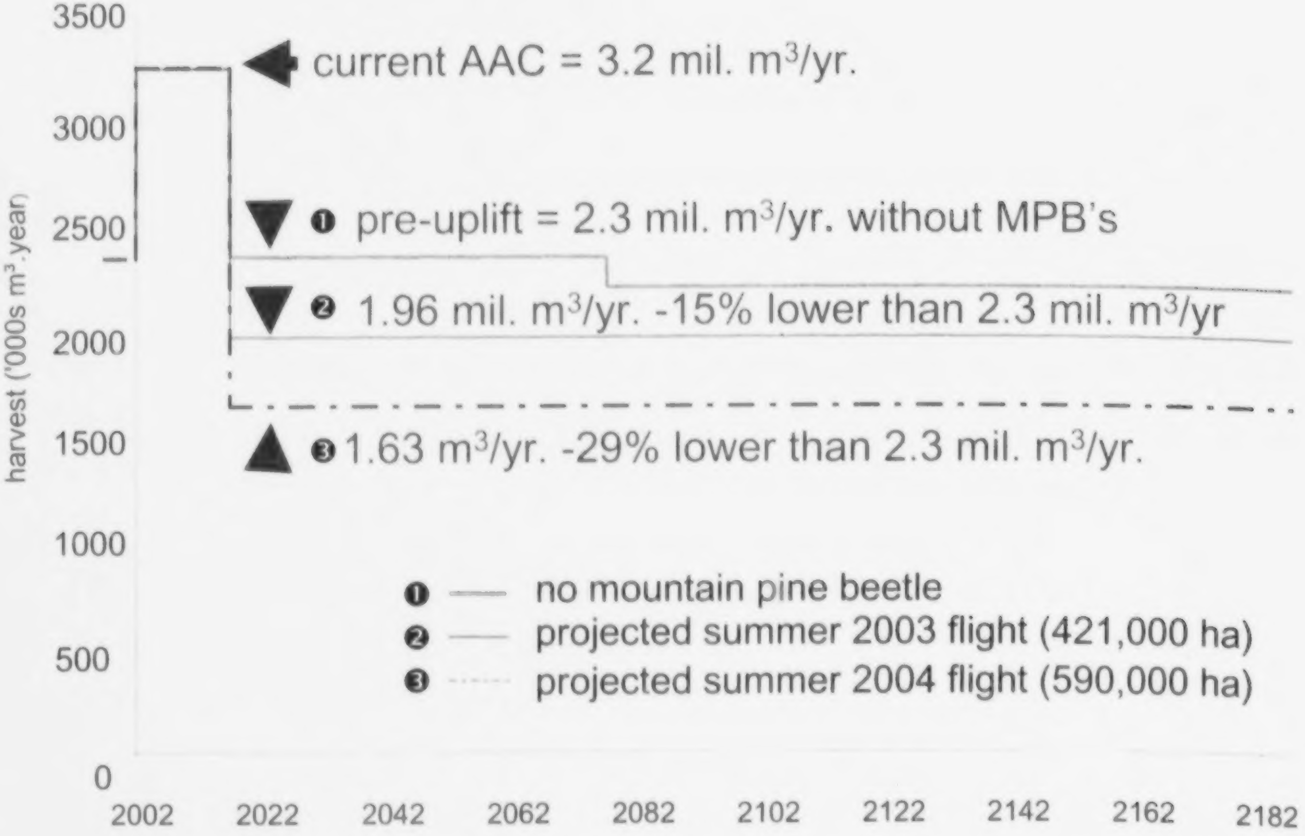
- an example of a severely infested TSA
- more detailed data available
- a true worst case scenario?

40% expansion rate

Attack level (per cent of attacked trees)



Quesnel TSA Projected Impacts



Analysis results

What did we learn?

- 2003 data & analysis show the seriousness of the problem
- harvesting will likely not keep up
- timber supply impacts could be reduced if:
  - direct more harvesting to pine,
  - regenerate areas more quickly,
  - shelf life could be extended, maybe by alternative uses of beetle-killed timber.

Challenges Ahead

- Continue to take aggressive action
- Collaborate on the completion of a responsive provincial beetle strategy
- Determine appropriate AAC strategies
- Consider alternative product potential:

  - the short and long term, and

  - understanding relationships between existing forest industry and possible new industrial users of beetle-killed timber.

For more copies of the report, *Timber Supply & the MPB infestation in BC*, see MoF website:

http://www.for.gov.bc.ca/hts

Thank you

Presentation to
The Premier's MPB Symposium - Quesnel

Battling British Columbia's Mountain Pine Beetle Epidemic – A Case Study in Collaboration

November 21, 2003

by

Douglas A. Routledge, RPF
Vice President, Northern Operations

Council of Forest Industries

Getting the Message Out – 1999 to 2003

- ☐ Industry Mountain Pine Beetle Emergency Task Force
  - ➢ Response to local industry, community and MoF calls for action.
  - ➢ Public attention and support.
  - ➢ Political and senior bureaucratic attention and support.
  - ➢ Increased human and financial resources.
  - ➢ Abbreviated timelines for action.
  - ➢ Document the story – marketplace.
- ☐ COFI Bark Beetle Subcommittee
  - ➢ Life after beetles.

Getting the Message Out – 1999 to 2003

☐ At Risk

- Timber supply
- Market share/continuity
- Community stability
- Environmental degradation
- Fisheries/Wildlife habitat
- Wilderness tourism
- Land Use Planning

Council of Forest Industries

In the Beginning

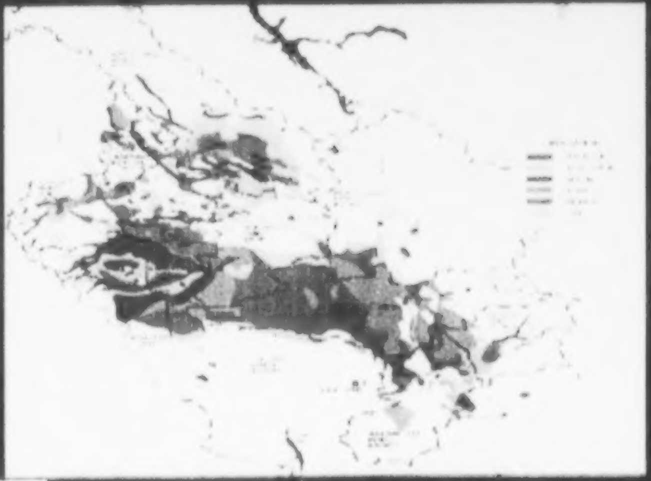
☐ Why an epidemic?

- ➢ Resident populations, natural part of pine ecosystems.
- ➢ Mild winters, two successive hot dry summers.
- ➢ One year life cycle
  - Rapid population response
  - Difficult detection ✓
- ➢ Extensive mature and over-mature pine stands.
- ➢ Poor access.
- ➢ Administrative/Economic Constraints
  - FPC administrative structure
  - Timber pricing system unresponsive

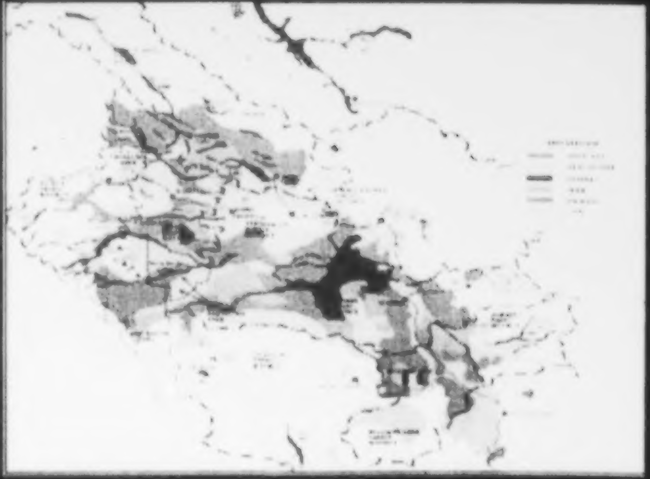
1999 - 6 Million cubic meters

West Central Mountain
Pine Beetle Epidemic

2000 - 40 Million cubic meters



2001 - 72 Million cubic meters



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Cumulative Area/Volume Under Attack in the Working Forest (Grey, Red & Green)

Year	Geographical Area Spread Over	Area Spread Over (ha)	Volume (million m3)
1994	Tweedsmuir/Ootsa	2,500	0.1
1995	Tweedsmuir/Ootsa	5,000	0.2
1996	Tweedsmuir/Ootsa	7,500	0.3
1997	Tweedsmuir/Ootsa	22,500	0.5
1998	Houston to Entiako	122,500	2.5
1999	Houston to Quesnel	322,500	6
2000	Takla Lake/Houston to Williams Lake	5.7 million	40
2001	Takla Lake/Smithers to 100 Mile House	8.0 million	72
2002	Takla Lake/Smithers to Cranbrook	9.0 million	108
2003	Williams Lake/Smithers to Cranbrook	?10-12 million?	? 150 – 170?

Source: CLMA/NFPA Mountain Pine Beetle Emergency Task Force

COFI Council of Forest Industries

108 Million cubic meters

WEST CENTRAL
MOUNTAIN PINE BEETLE
EPIDEMIC
2002
N

Strategies for Mitigating the Epidemic – Leading Edge

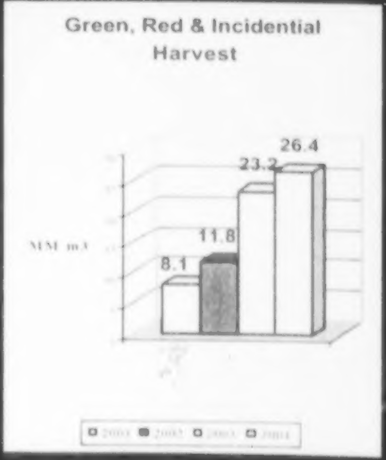
☐ Actions taken – Short term/leading edge

- ➢ Maximizing the existing harvest capacity
  - Early detection/information
  - Small patch salvage
  - Multi pass blocks
  - Bladed trails
  - Remote single tree
  - Administrative streamlining
  - Removing the economic barriers
- ➢ Bringing more harvest capacity to bear
  - Haul differential
  - Economic test

Strategies for Mitigating - Performance Measures

☐ So how are we doing?

- Volume directed at the beetle
  - 1999/2000 - 6.0 million m3
  - 2000/2001 - 8.1 million m3
  - 2001/2002 - 11.8 million m3
  - 2002/2003 - 23.2 million m3
  - 2003/2004 - 26 to 27 million m3?
- Percentage directed at green attack stands
  - 2000/2001 - 65% of available harvest capacity
  - 2001/2002 - 67% of available harvest capacity
  - 2002/2003 - 81% of available harvest capacity
  - 2003/2004 - 82% of available harvest capacity?



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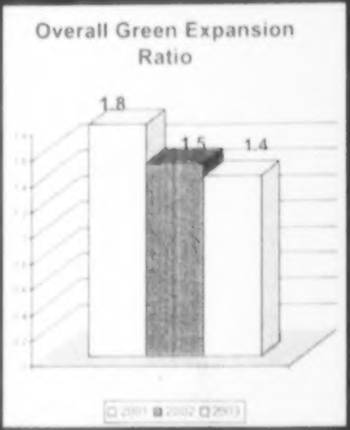
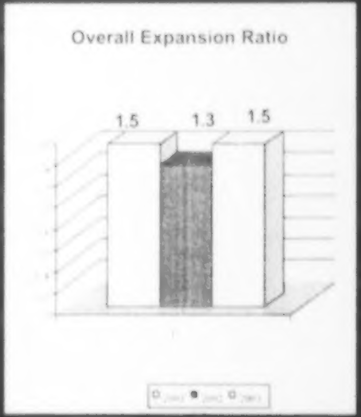
Strategies for Mitigating - Performance Measures

☐ So how are we doing? (cont'd)

- ➢ Rate of expansion
  - Highly variable (leading edge vs main body)
  - 2001-2003 green 1.8/1.5/1.4
  - 2001-2003 overall 1.5/1.3/1.5
  - We ARE having an impact
- ➢ But, delaying tactic - need Mother Nature's help.
- ➢ Recent loss of tools.





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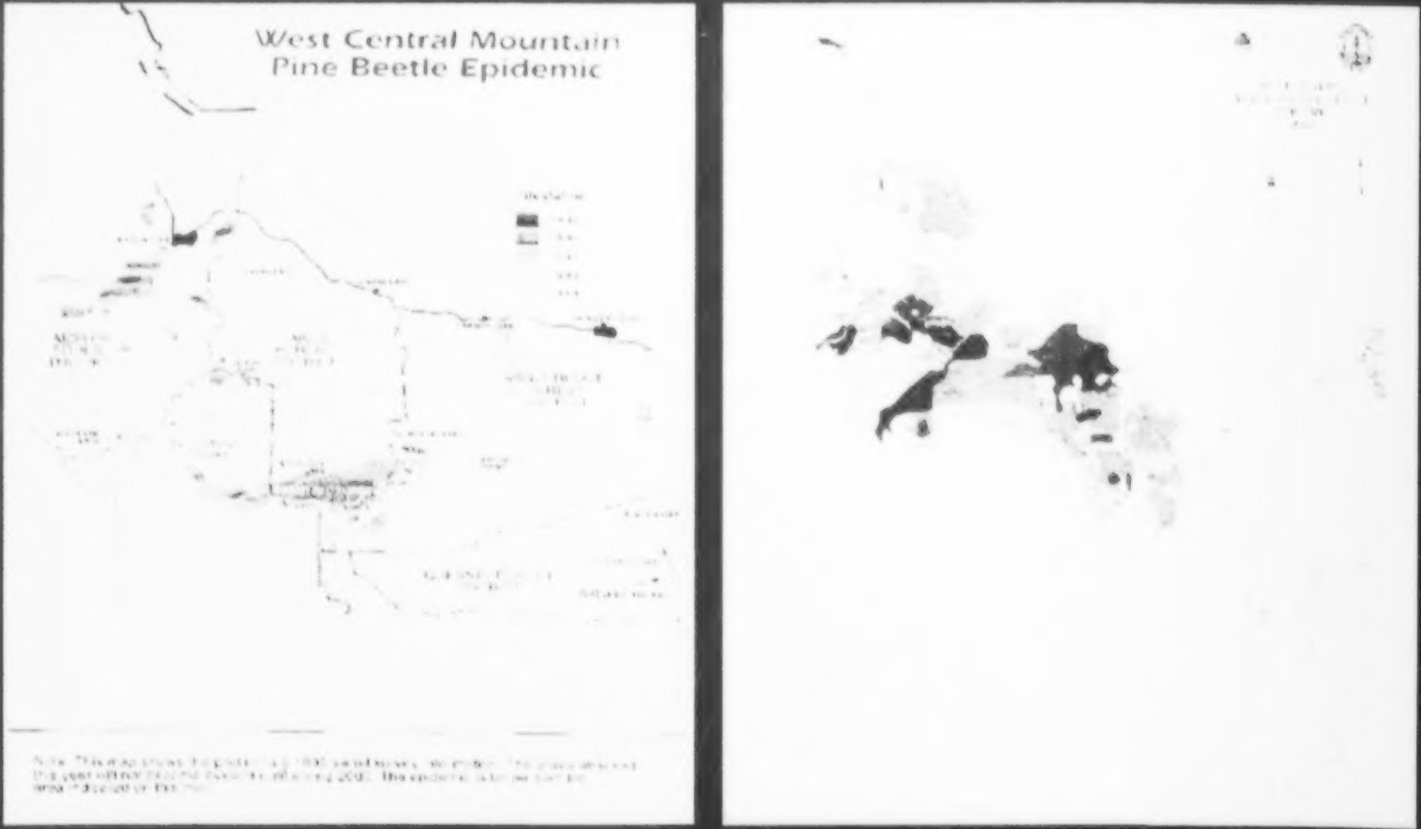
West Central Mountain Pine Beetle Epidemic



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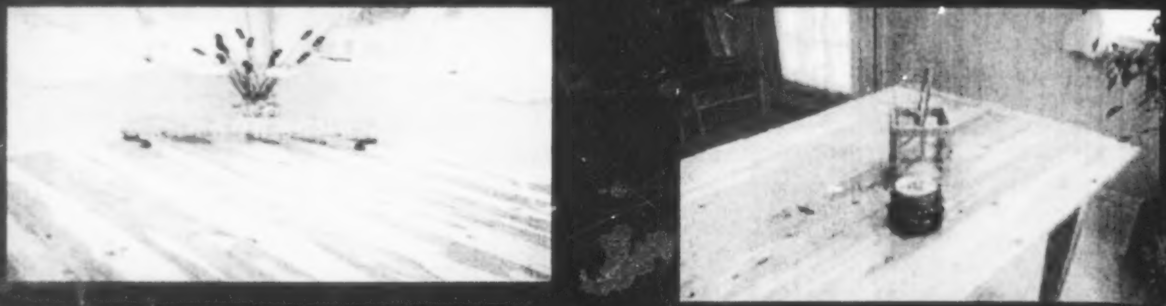
Strategies for Mitigating the Epidemic – In the Wake

☐ Long Term; Economic and Community Stability

- ➢ Federal government role
  - Economic diversification support
  - Environmentally sensitive areas
- ➢ Shelf life studies
  - On the stump
  - Submerged
  - Priority stands
- ➢ "Beetle proofing" the future
  - Access
  - Stand structure
  - Landscape mosaic, landscape level planning

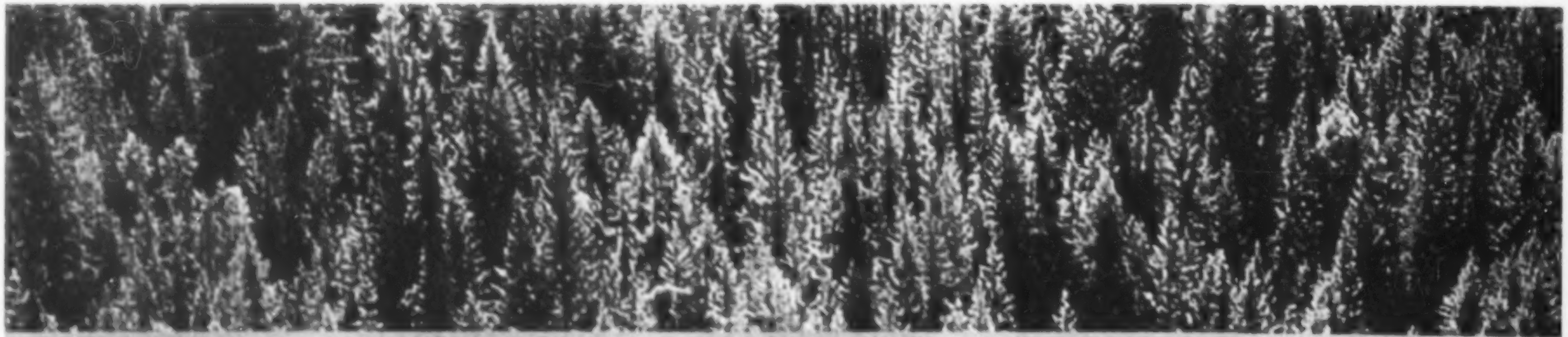
Strategies for Mitigating the Epidemic – In the Wake

- ☐ Long Term (cont'd)
  - ➢ Community stability
    - Timber Supply Analysis - understanding
    - Contractor "conversion" (to rehabilitation)
    - Environmentally sensitive areas
    - Reciprocal timber supply agreements
    - Traditional markets; wood quality "unaltered"
    - Alternate markets; "Denim Pine"



In Conclusion

- ☐ Expanding out of control - no end in sight.
  - ➢ Unchecked by Mother Nature; 150 - 170 million m3 by fall 2003?
- ☐ MoF/Industry efforts ARE having effect
  - ➢ But need Mother Nature's help
- ☐ There will be life after beetle
  - ➢ Federal Role
  - ➢ Provincial Government/Industry Role
  - ➢ Community Role
- ☐ Web Sites:
  - ➢ www.mountainpinebeetle.com
  - ➢ www.for.gov.bc.ca/PAB/News/Features/beetles
  - ➢ www.mpb.cfs.nrcan.gc.ca/
  - ➢ www.denimpine.ca



Exploring Market Opportunities for Mountain Pine Beetle-affected Wood

November 21, 2003

Forestry
Innovation
Investment

Overview

- Overview of Forestry Innovation Investment
- Developing and promoting opportunities for pine beetle-affected wood
- Conclusion

Forestry Innovation Investment

- Increasing the value of the forest asset through:
  - ✓ Product development, international marketing
- FII Marketing Program:
  - ✓ Coordinating BC Government investments
  - ✓ Retaining and developing existing markets for BC forest products in Japan, Europe and the United States
  - ✓ Developing new market opportunities: China, Taiwan and Korea
- Promoting BC's sustainable forest management
- Managing special initiatives & broad provincial focus
  - ✓ International marketing, web sites, DVDs, directories / publications

Forestry
Innovation
Investment

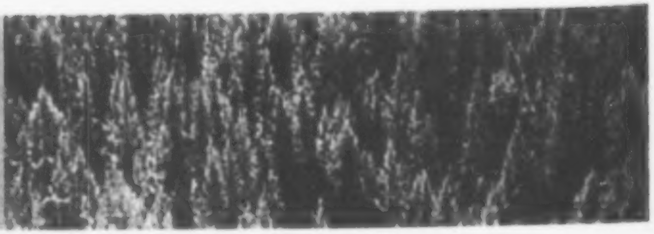
Diversifying Products through Market Development

- BC is one of the world's leading exporters of wood products – track record of quality, reliability and global experience
- BC produces a wide range of wood products – from dimensional construction lumber to value-added specialty wood products
- Internationally recognized technical standards
- Proven commitment to sustainability

Market Access Strategies

- Developing new markets key to diversification
  - ✓ Gathering market intelligence, identifying market opportunities
  - ✓ Increasing market awareness
  - ✓ Addressing market access issues
  - ✓ Building demand
- Key objective of overcoming barriers to trade in existing and emerging markets
- Market development is a partnership
  - ✓ Industry, Associations, BC Government, Federal Government and engaged interests in the marketplace

Market Perception Risks



- Need to address potential market concerns about fibre availability
  - ✓ Supply stability is a critical product sourcing criteria for established international markets
  - ✓ Important to new markets as well
- Opportunity to mitigate concerns over potential product supply impacts
  - ✓ i.e. – questions at Japan Home Show

Marketing Challenges of Beetle-affected Wood

- Marketing beetle-affected wood offers both challenges and opportunities
- Conveying structural integrity of wood
  - ✓ Affected trees can be harvested within 15 years without impacting product quality
  - ✓ After harvesting, wood is as structurally sound as any wood
- Countering concerns of fungus stain effects – blue or grey stain
  - ✓ Perception challenges in international markets – in some cases, sales may be conditional on discount rate, despite good quality of wood
- Showing there are no risks to forests from imported pine beetle wood
  - ✓ Demonstrate to international markets safety of pine beetle wood
  - ✓ No risks of transporting beetle problem

Marketing
Beetle-affected Wood

Opportunities for selling beetle-affected wood:

- Capacity of the North American market
  - ✓ Efforts to develop new capacity in non-residential applications
- Some value-added opportunities based on appearance of wood
  - ✓ Opportunities identified through groups such as “Denim Pine”
  - ✓ But limited demand in relation to the scale of the beetle infestation
- Developing new large-scale markets for beetle-affected wood
  - ✓ Emerging markets such as China and others
- Research to demonstrate structural safety of wood
  - ✓ Allowing local scientists to verify product quality and safety to satisfy international markets and expedite approvals for pine beetle wood imports
- Demonstrating BC’s environmental stewardship

Market Realities

- Pricing factors could assist the opening of emerging markets
  - ✓ Low-cost applications
  - ✓ Hybrid, multi-family dwellings
  - ✓ Products for remanufacture
- Market development takes time
  - ✓ FII and industry are committed and active in key emerging markets such as China

Emerging Market Potential in China

- China is the fastest emerging market for BC wood exports
  - ✓ 10 million housing starts per year
  - ✓ Currently 500 homes built per year with wood
  - ✓ New building code will encourage wood construction for housing
- Dream Home China demonstration project positions BC as a market leader
- Other Opportunities for wood export promotion:
  - ✓ Beijing Summer Olympics 2008
  - ✓ Shanghai World Fair 2010
  - ✓ Multi-family hybrid construction
  - ✓ Non-residential construction

Forestry
Innovation
Investment

Encouraging Progress in China

- Letter of intent with Chinese Academy of Forestry to study opportunities for naturally damaged wood
- Research will confirm what BC already knows
  - ✓ Beetle-affected wood is structurally sound
  - ✓ Fungus stain does not affect strength, gluing or finishing
  - ✓ There is no threat of beetle transfer
  - ✓ Various commercial opportunities for pine beetle and fire-damaged wood
- Allows CAF and SFA to contribute to identification of new product opportunities in China, and to address technical barriers to trade

Emerging Market Potential in Korea

- FII and partners preparing market launch for Korea
- *Research indicates* no aversion to stained wood in Korea
- FII evaluating proposals for further market development in Korea
    - ✓ Strategy for full wood market development, not just pine beetle wood
- FII continuing to explore other international markets

FII Product Development Program

- In addition to CAF, FII's product development program will consider funding research for new products and new product applications
    - ✓ RFP in December and January, funds available in April
- Research must be non-proprietary, results broadly available to all potential product producers
- Priority on research creating commercial opportunities for BC wood products
    - Past examples:
        - Characterizing the properties of Mountain Pine Beetle affected wood
        - Applications for lesser-used wood species
- Opportunities in energy and other product development to be addressed by other presenters

Forestry
Innovation
Investment

Conclusion

- Summary
  - Continue market development / market retention activities for BC products including pine beetle affected wood
  - Continue market intelligence and market strategy development
  - Support new product development
  - Promote BC's world-class environmental stewardship
  - Work closely with industry, associations, technical institutions
  - Address inclusion of beetle affected wood within investment and individual market strategies

Mountain Pine Beetle Symposium

Province of British Columbia

"Opportunities for increased production and alternative products"

Ian de la Roche

November 21, 2003
Quesnel, BC

Forintek
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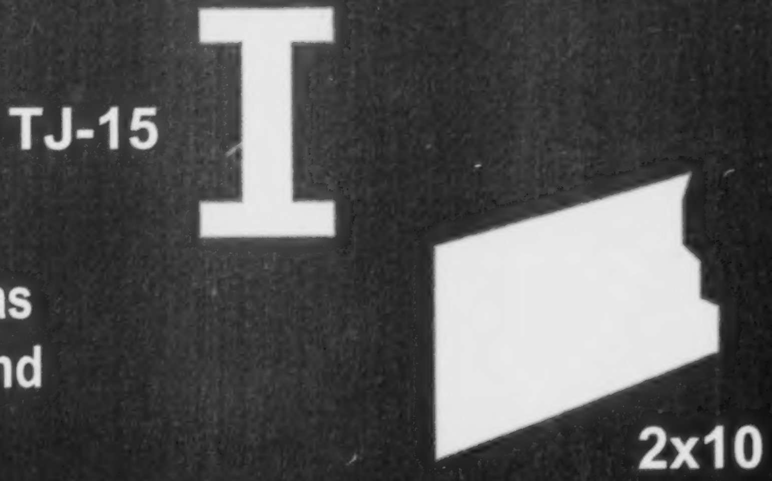
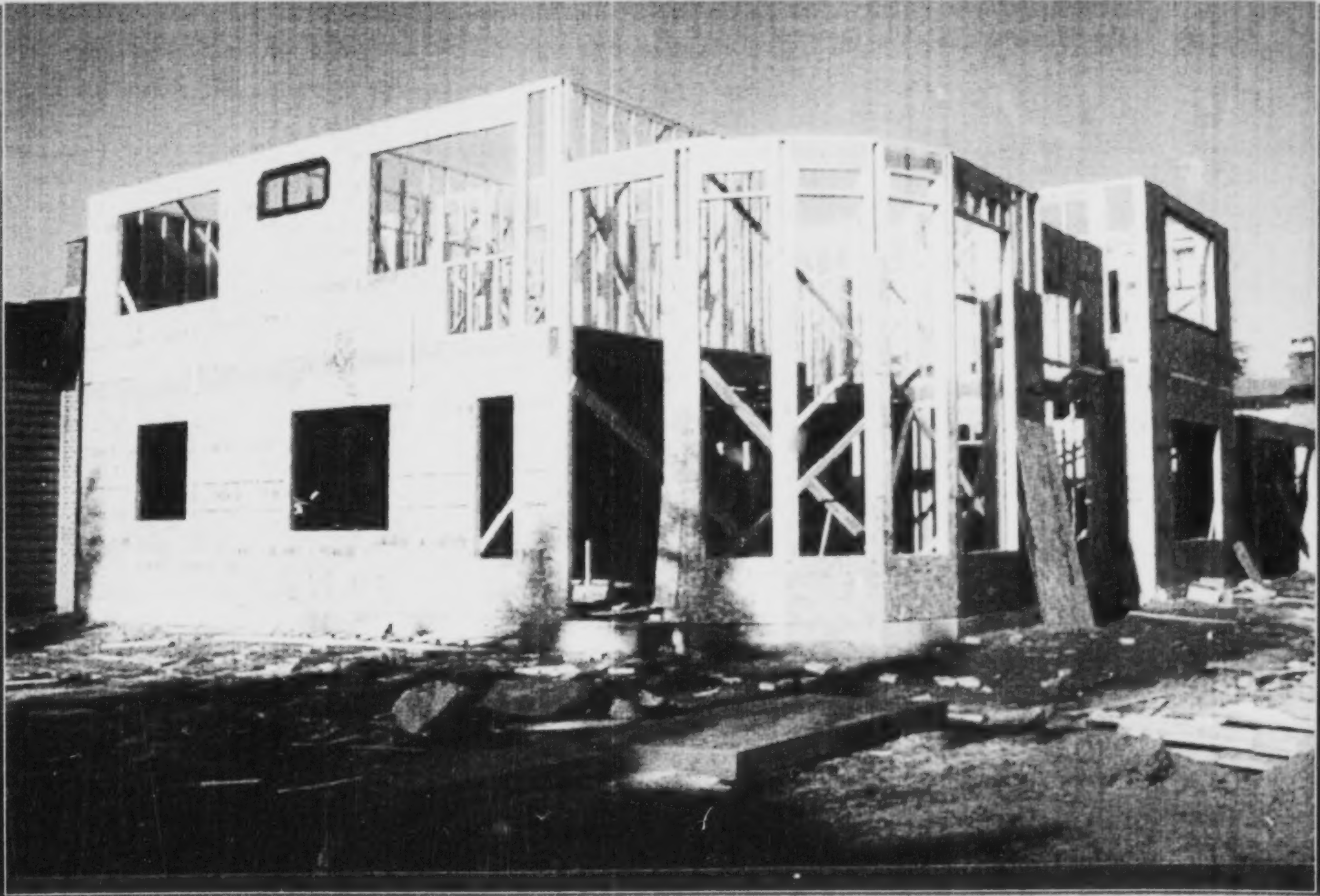
Efficiency of Engineered Wood Products

Silent Floor
Silent Floor
Silent Floor



The comparable size I-Beam has 20% less fibre per linear foot and is stronger

OSB Cladding



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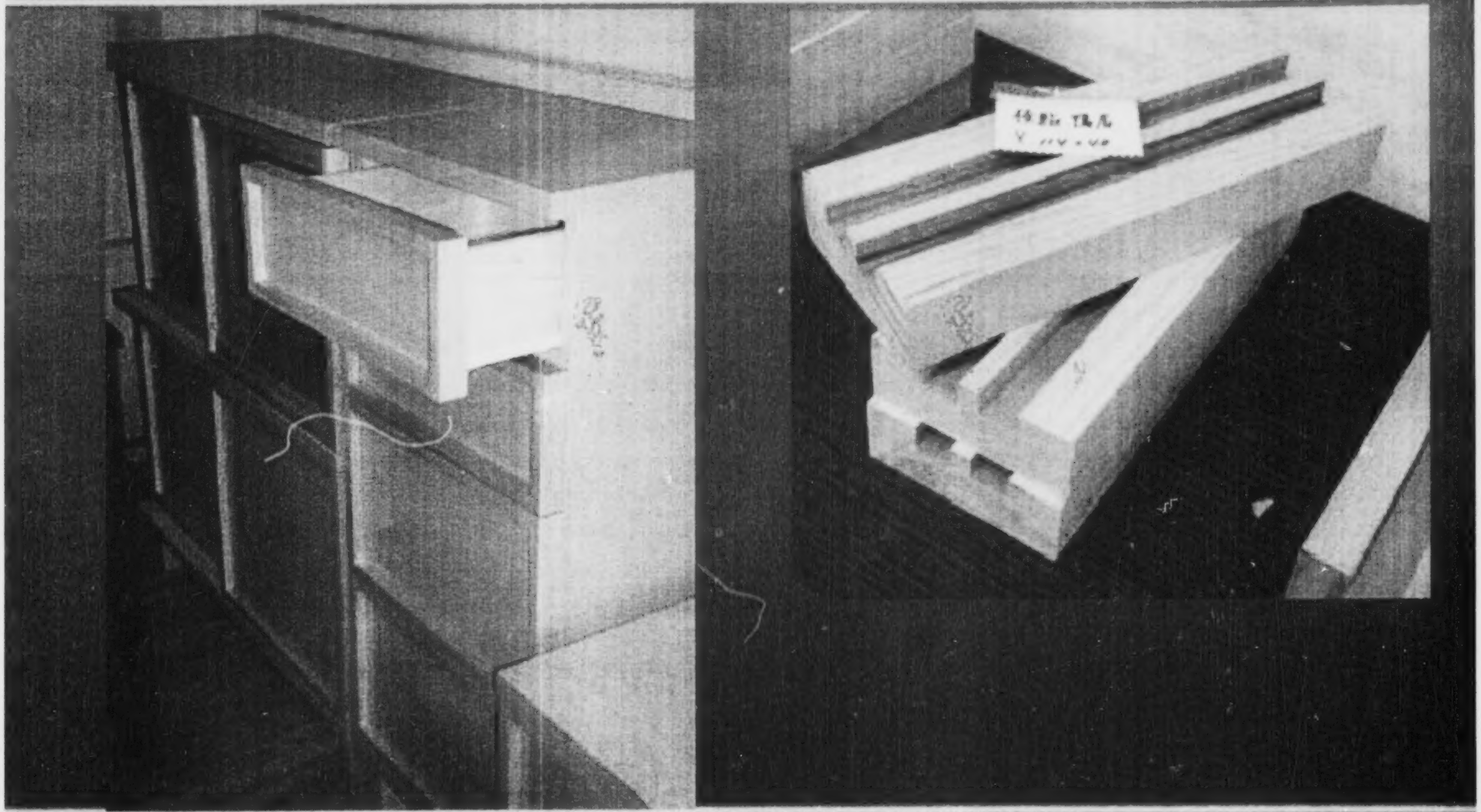
Aspen in Japan



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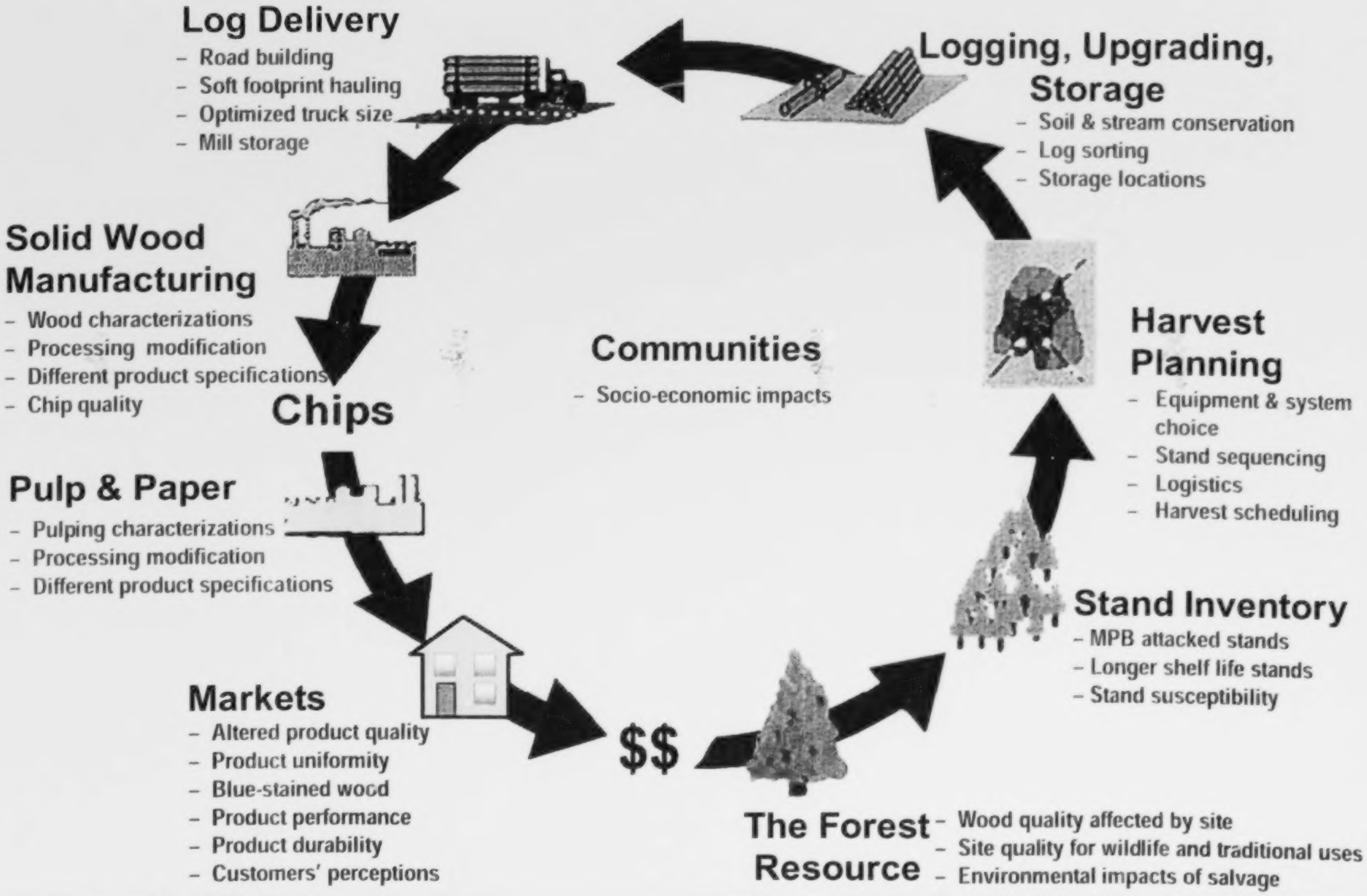
Forest Sector Value Chain



Log Delivery
- Road building
- Soft footprint hauling
- Optimized truck size
- Mill storage

Logging, Upgrading, Storage
- Soil & stream conservation
- Log sorting
- Storage locations

Solid Wood Manufacturing
- Wood characterizations
- Processing modification
- Different product specifications
- Chip quality

Chips

Communities
- Socio-economic impacts

Harvest Planning
- Equipment & system choice
- Stand sequencing
- Logistics
- Harvest scheduling

Pulp & Paper
- Pulping characterizations
- Processing modification
- Different product specifications

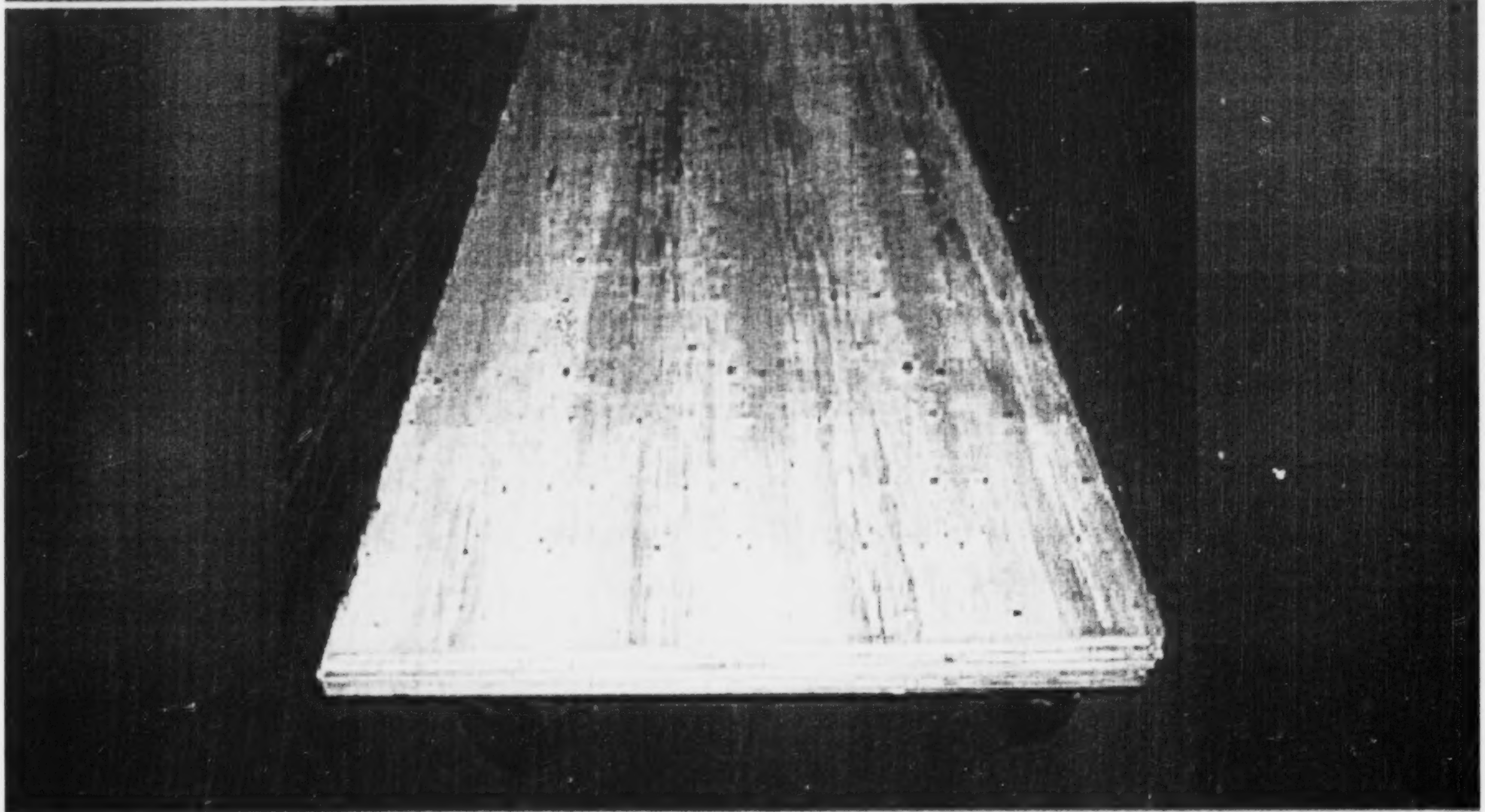
Stand Inventory
- MPB attacked stands
- Longer shelf life stands
- Stand susceptibility

Markets
- Altered product quality
- Product uniformity
- Blue-stained wood
- Product performance
- Product durability
- Customers' perceptions

$$

The Forest Resource
- Wood quality affected by site
- Site quality for wildlife and traditional uses
- Environmental impacts of salvage

Bluestained Plywood



Bluestain has no practical effect on lumber properties

Confirmed Properties

- ➢Strength
- ➢Stiffness
- ➢Impact resistance
- ➢Truss plate grip capacity
- ➢Dimensional stability
- ➢Permeability
- ➢Glue joint integrity
- ➢Finishing properties
- ➢Finish adhesion

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Canada's National Wood
Products Research Institute

Wood Protection Bulletin

Western Division

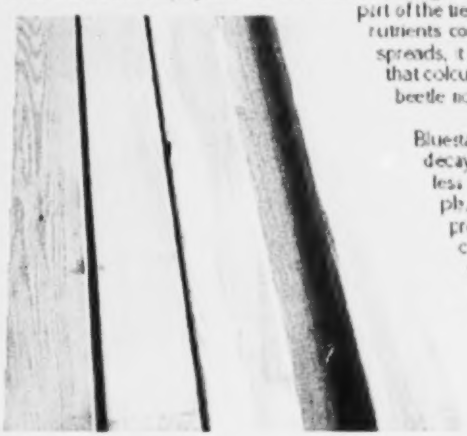
July 2003

Properties of Lumber with Beetle-Transmitted Bluestain

Users of lumber are probably familiar with bluestain. Some may wonder if the amount and type of stain transmitted by the mountain pine beetle affects the wood in any way. Comprehensive testing recently confirmed that beetle-transmitted bluestain has no practical effect on strength properties or gluing characteristics. Neither does the bluestain affect the adhesion of furniture finishes. The stain causes some possibly beneficial changes to dimensional stability, checking and permeability.

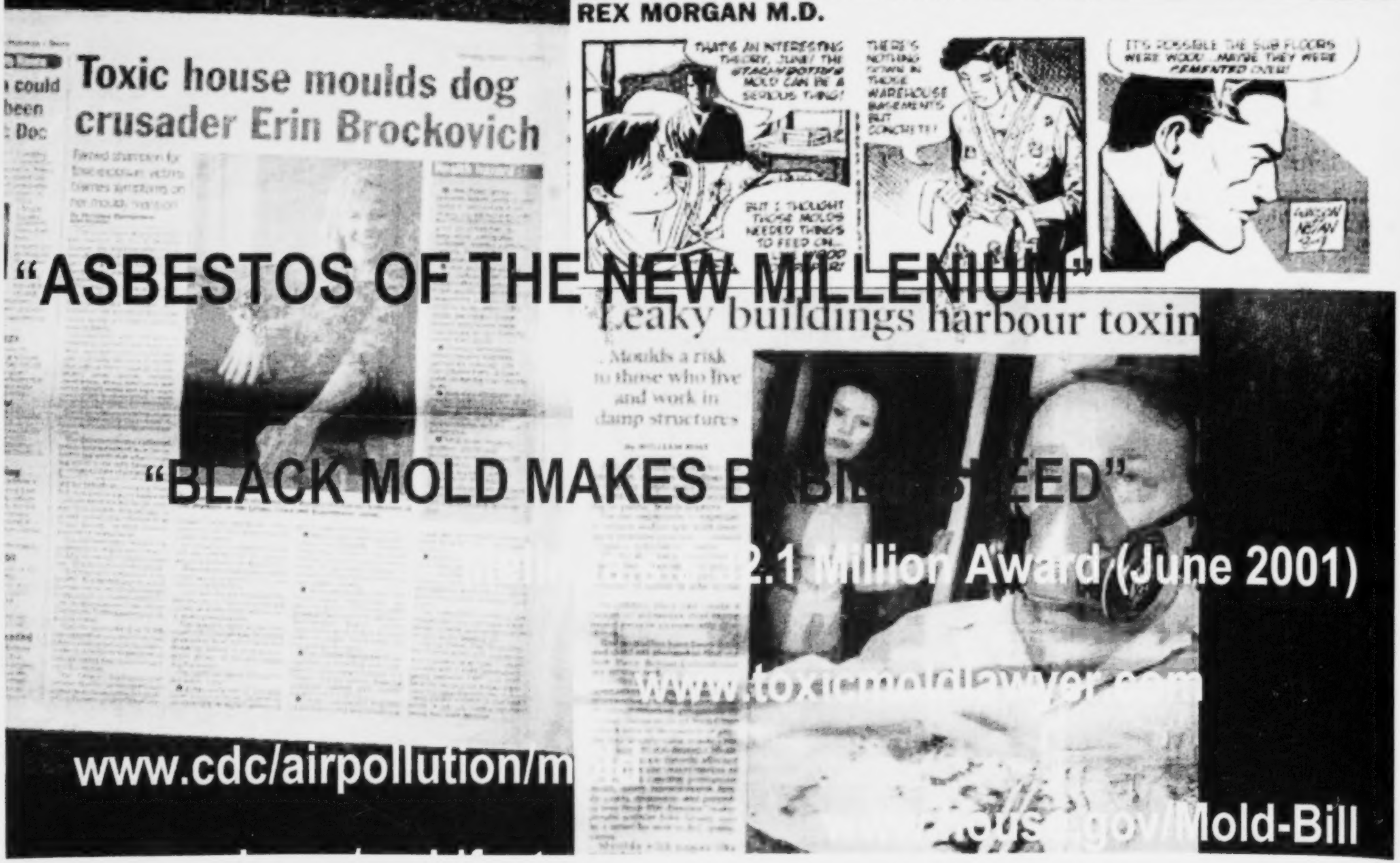
Regular customers for western spruce-pine-fir lumber have probably seen some bluestain, a subtle streaking in the lumber. At the moment, bluestain is more prevalent than in the past, because British Columbia is currently experiencing a large natural outbreak of mountain pine beetle (MPB). Native to the forests of western North America, the MPB attacks several species of pine trees, including ones commonly used for construction lumber and panels. The beetle carries with it a staining fungus that weakens the tree's defences which allows the insect to lay eggs under the bark.

While the beetle stays just under the bark, the fungus can grow throughout the sapwood (the outer part of the tree) feeding on sugars, carbohydrates and other nutrients contained within the wood cells. As the fungus spreads, it leaves behind a permanent blue or grey stain that colours products made from this wood. Neither the beetle nor the fungus eats the wood structure itself.



Bluestain fungi are not mold, nor do they cause decay (rot) problems. They are considered harmless with respect to both wood products and people, and are typically dead by the time the wood products leave the manufacturer. The wood can be handled exactly as with non-bluestained wood. Because it looks slightly different, questions are sometimes asked about bluestained wood. Forintek performed a series of tests to address any possible marketplace concerns and to provide a scientific basis for the anecdotal evidence that bluestained wood is equivalent to non-bluestained wood.

Bluestain is not mold!!



could been Doc

Toxic house moulds dog crusader Erin Brockovich

REX MORGAN M.D.
THAT'S AN INTERESTING THEORY, JUNE! THE STACHYBOTRYS MOLD CAN BE A SERIOUS THING!
BUT I THOUGHT THOSE MOLDS NEEDED THINGS TO FEED ON... WOOD
THERE'S NOTHING DOWN IN THOSE WAREHOUSE BASEMENTS BUT CONCRETE!
IT'S POSSIBLE THE SUB FLOORS WERE WOOD ...MAYBE THEY WERE CEMENTED OVER!

Leaky buildings harbour toxin

Moulds a risk to those who live and work in damp structures

“ASBESTOS OF THE NEW MILLENIUM”

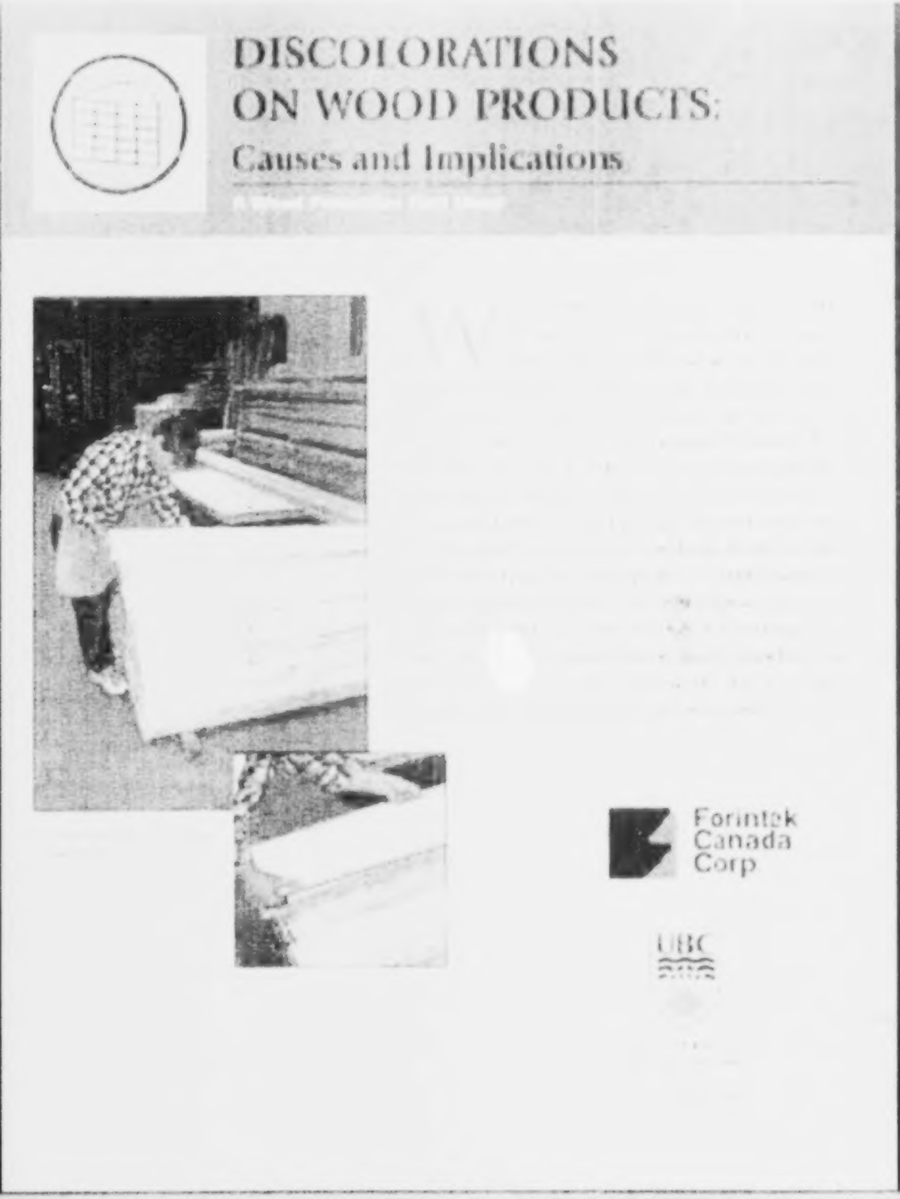
“BLACK MOLD MAKES BABIES BLEED”

2.1 Million Award (June 2001)

www.toxicmoldlawyer.com

www.cdc/airpollution/m

ouse.gov/Mold-Bill



DISCOLORATIONS
ON WOOD PRODUCTS:
Causes and Implications

Forintek Canada Corp

UBC

Forintek fact
sheets available at
www.forintek.ca

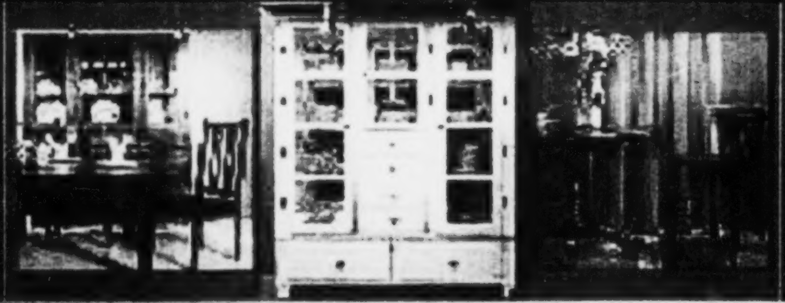
Forintek Canada Corp.

Carbon Dioxide Sequestration & Storage

Plantation (20-50yrs)

Shelter Systems (60-80 yrs)

Recycled into Furniture (20-30 yrs)



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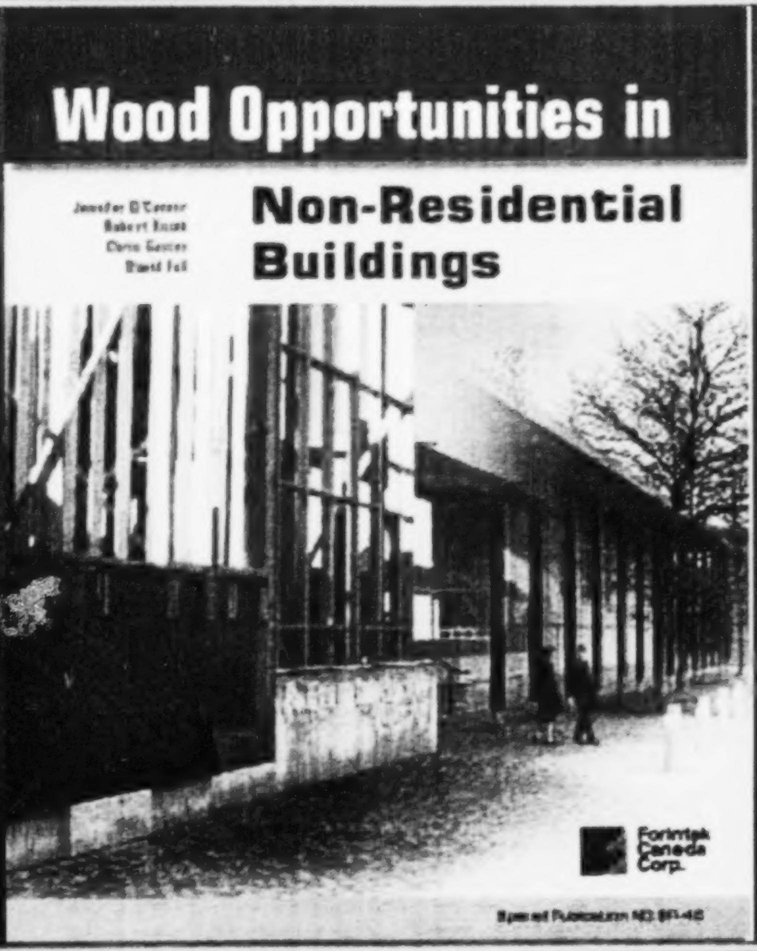
Non-Residential



Wood Opportunities in

Non-Residential
Buildings

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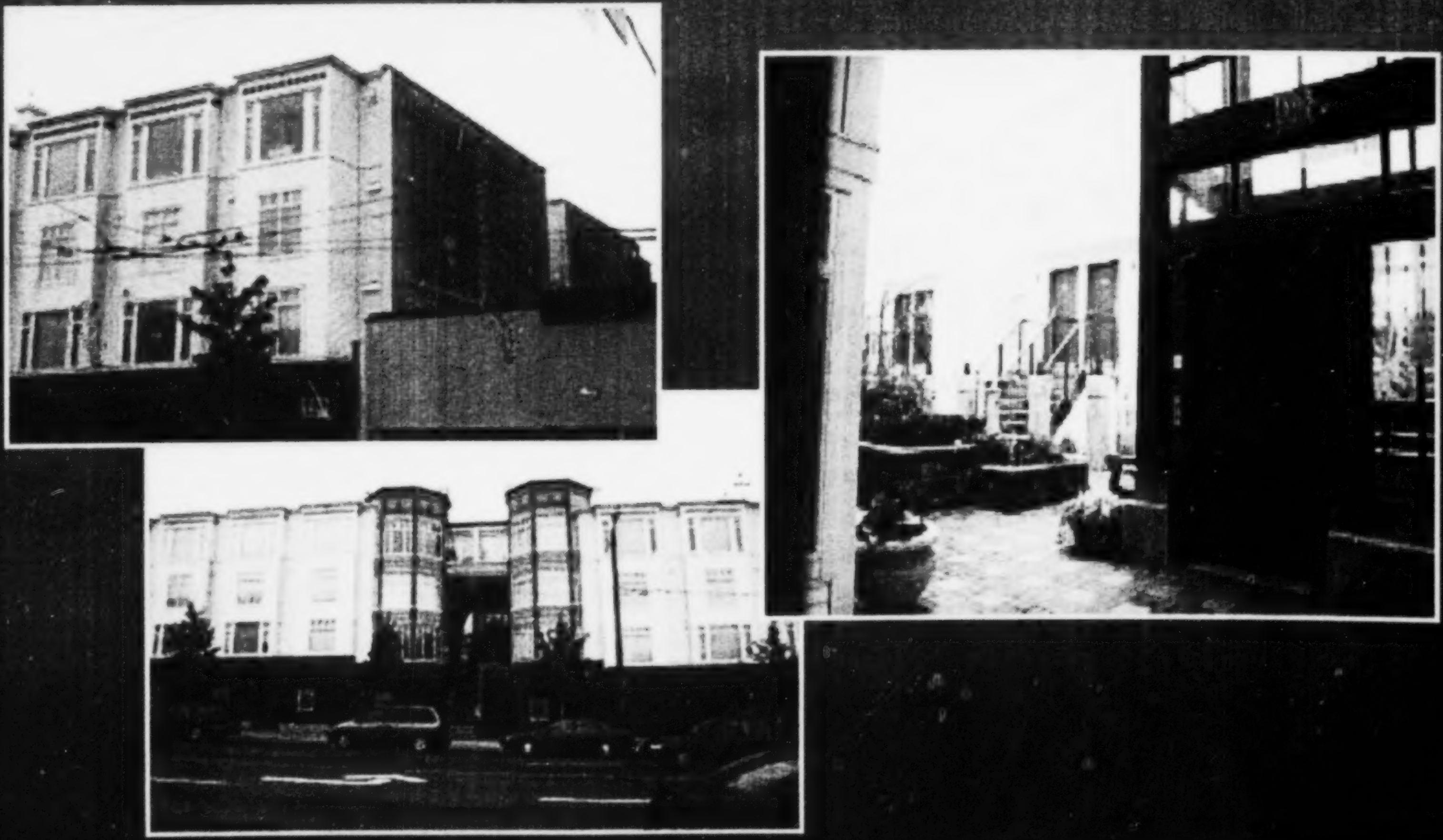
4-Storey Vertically and Horizontally Separated Units



Non-Residential

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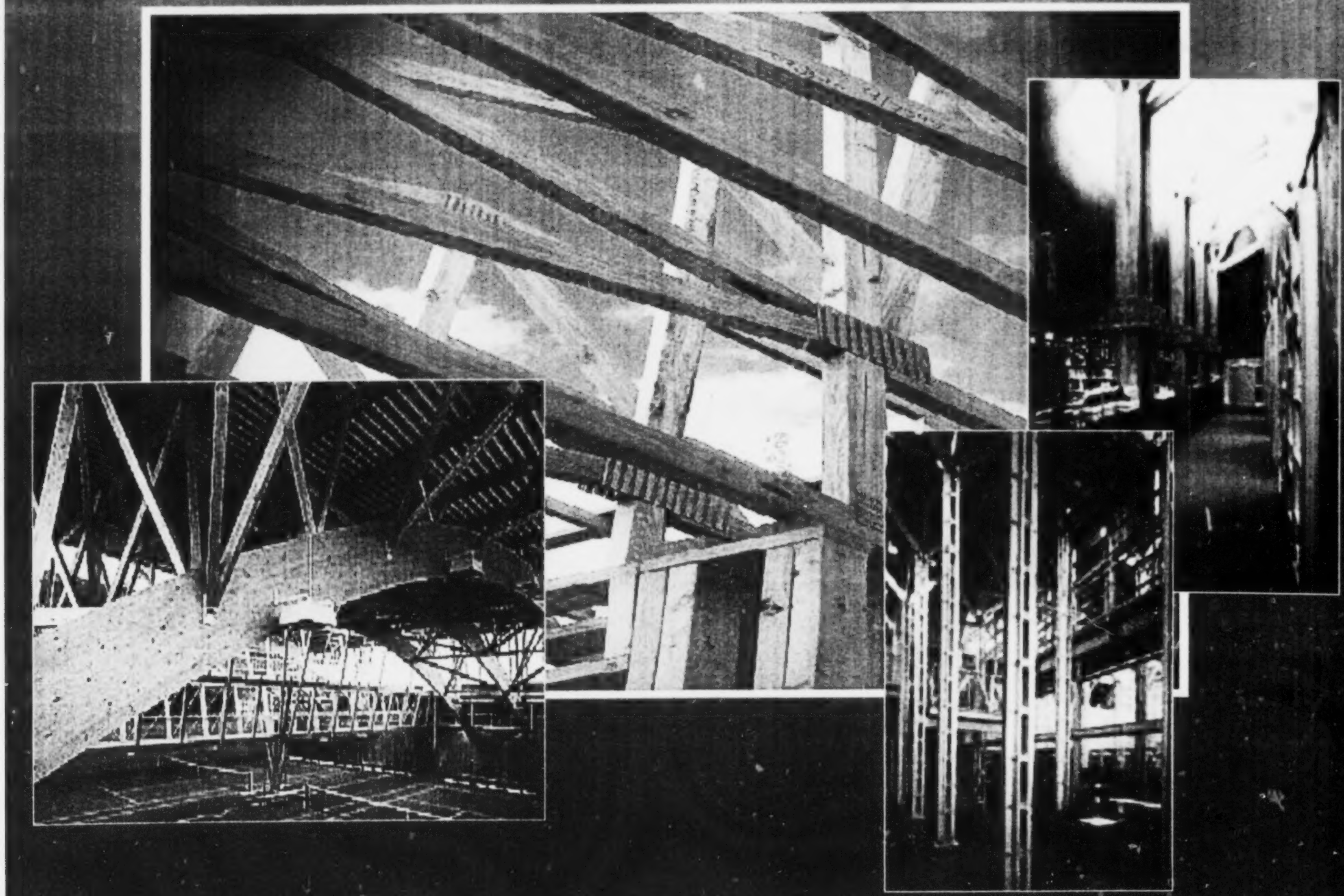

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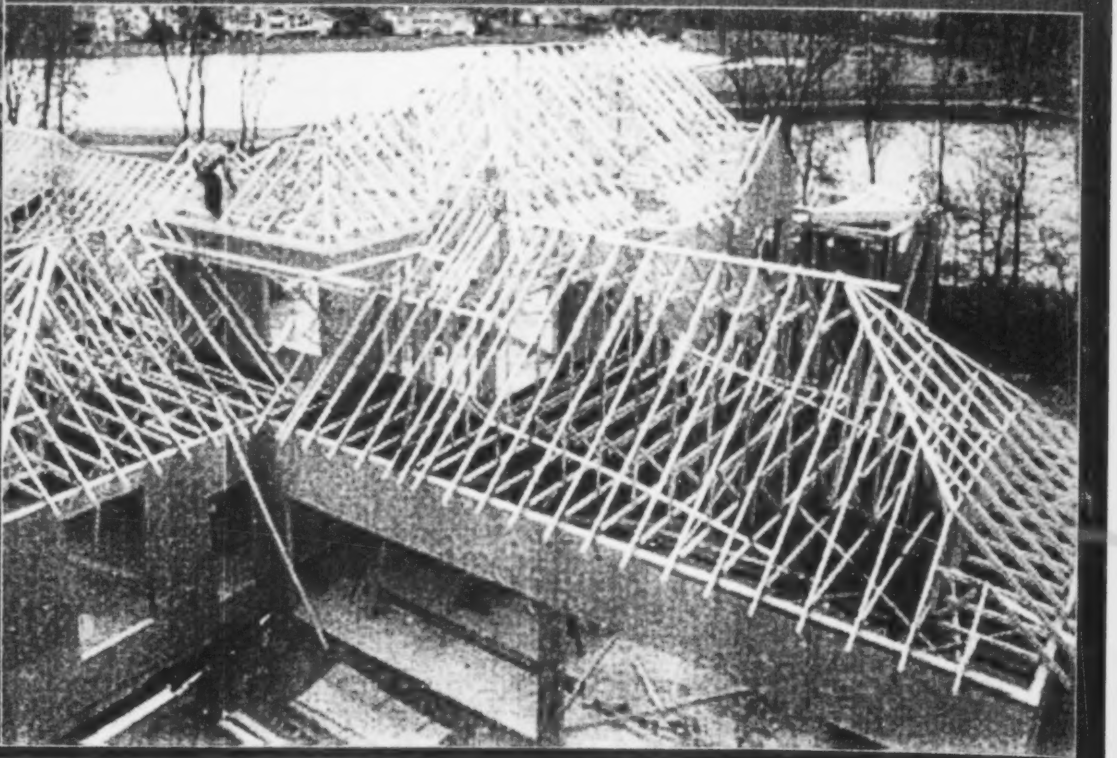
Expanding Wood Use in Wood Construction

Balanced Strategy

- ✓ Market intelligence
- ✓ Regulatory advocacy
- ✓ Awareness and assistance
- ✓ Applied research & regulatory support
- ✓ Industry marketing

Wood is ...
Recyclable & Renewable

Sequesters Carbon Dioxide



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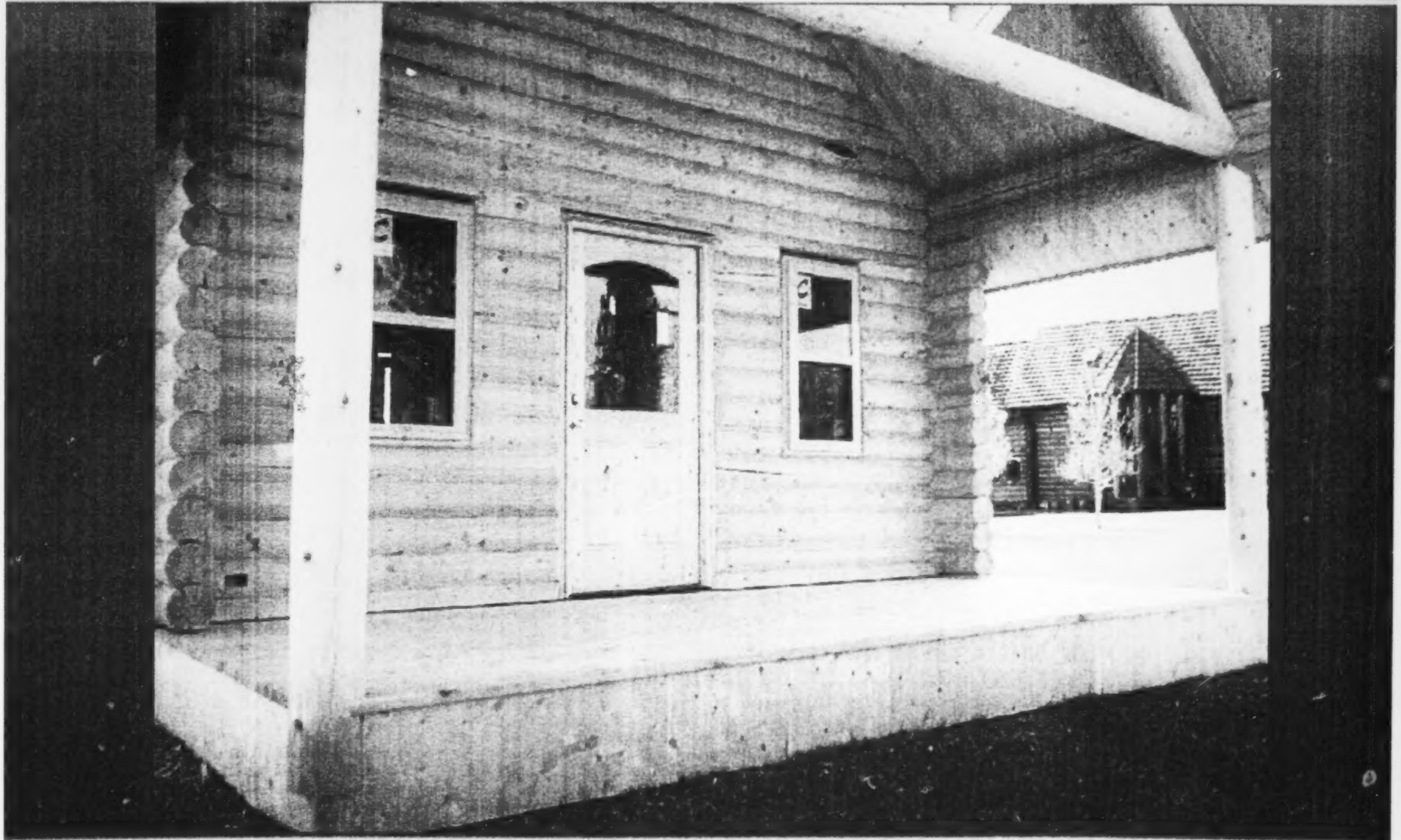
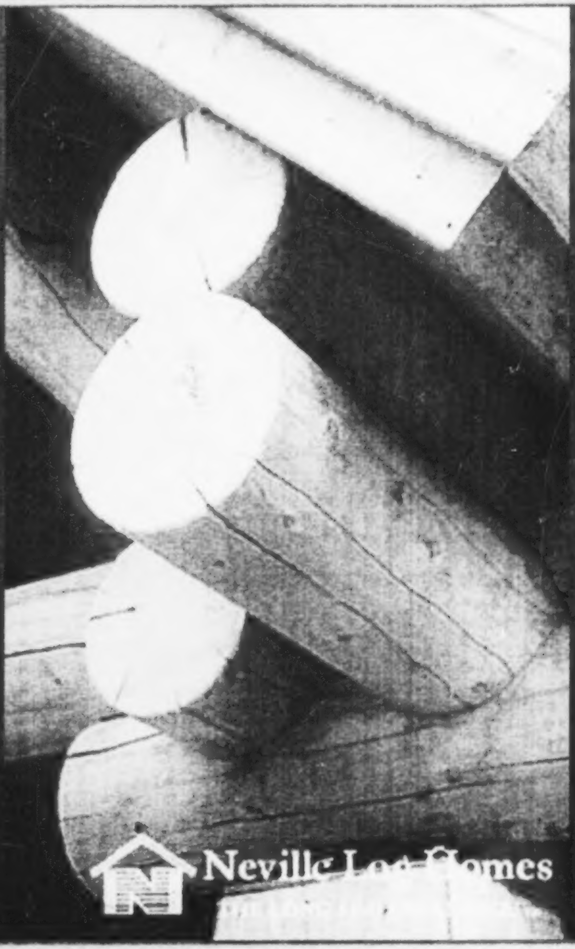
Denim Pine Flooring

Source: Denim Pine Marketing Association

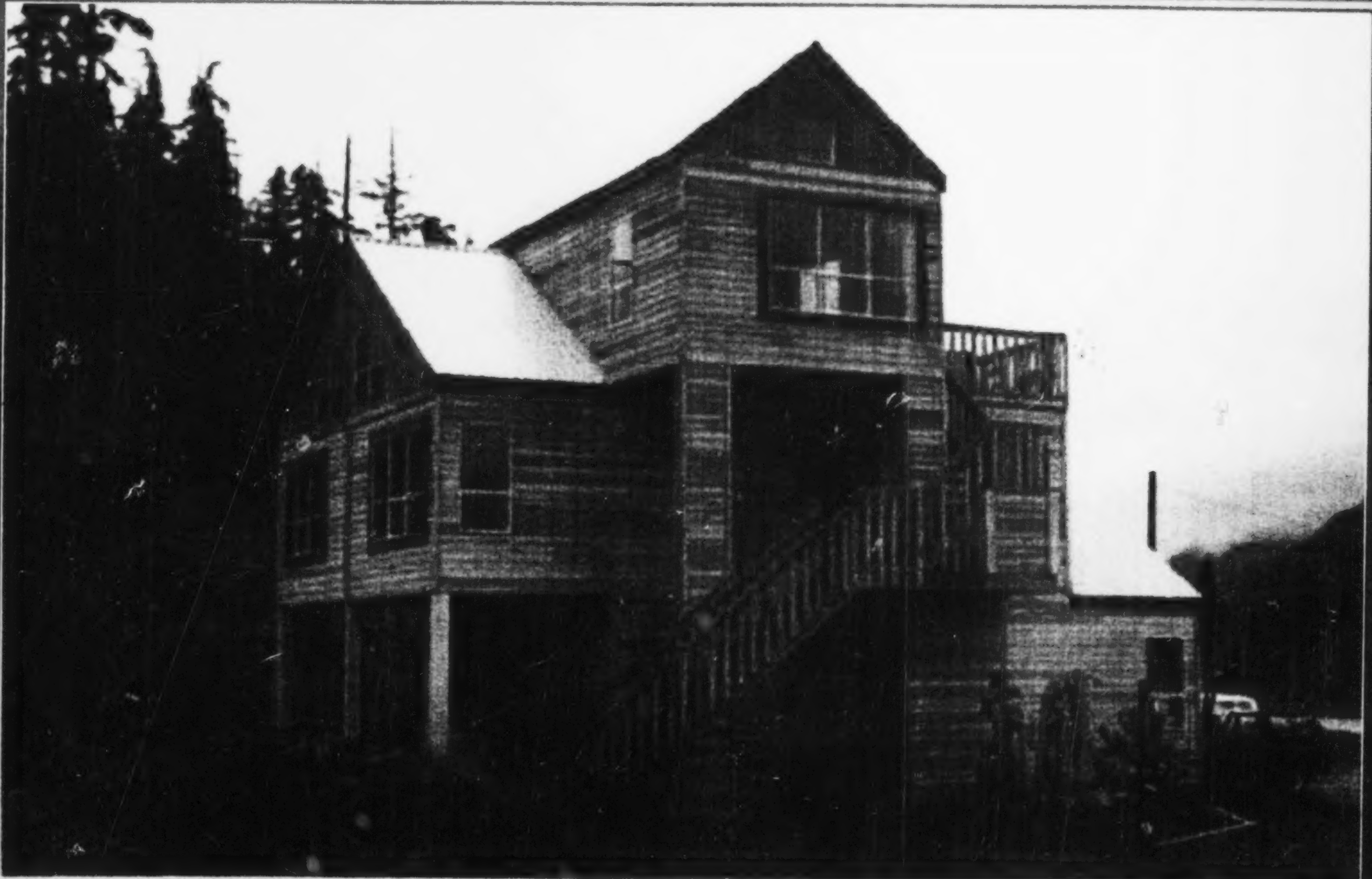
Neville Log Home



Neville Log Home


Neville Log Homes

Modular House Construction



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Forest Sector

Vision

To build a Knowledge-centered, Technology- and Innovation-based Forest Sector

- Internationally Competitive Industry
- Abundant Sustainable Forest
- Stable Communities

Check against delivery

MOUNTAIN PINE BEETLE SYMPOSIUM
Province of British Columbia
November 21, 2003 – Quesnel, BC

"Opportunities for increased production and alternative products"

Ian de la Roche, Forintek Canada Corp.

The recent report by Larry Pedersen, The Chief Forester, clearly laid out the enormity of the problem facing the BC interior as a result of the Mountain Pine Beetle infestation. An additional 4,200,000 hectares infested this past year. To date, we have over 150 million m^3 of lodgepole that has been beetle-killed. **How do we recover the lost value from such a large volume of dead wood?**

There is **no silver bullet** – the solution lies in a mix of new ideas and different approaches. Some are available now and other will evolve over a period of years.

First principle is **build on our strengths and past successes.** The industry and communities in British Columbia have demonstrated the ability to adapt to change. For instance, in the last 20 years we have seen log size at the millgate decrease by 30%, while lumber recovery has improved by more than 30%. Cost minimization technologies over the past 30 years have enabled our interior mills to continue to maintain their global position as low-cost procedures.

The development of Engineered Wood Products and systems permits the use of lower quality fibre, while maintaining or improving structural performance.

The growth of OSB was the direct result of trying to extract value from a weed species, aspen. Today, we are seeing aspen used for LVL and high-quality appearance products, such as flooring and furniture.

Important to recognize that three factors underpin these successes, namely, knowledge, innovation and technology.

Second principle: Take a value chain approach. No single element of the forest sector value chain is exempt from the MPB epidemic. Using a value chain approach, we can add value by adding knowledge, innovation and technology at each step or link in the value chain. This will allow us to order to reduce costs and recover more value in the products produced and marketed. Note that if the delivered cost of beetle-killed fibre is too high, adding value further along the chain will have little impact.

Third principle: Focus on the marketplace and customer acceptance. Identify the attribute desired by the customer and match them to the quality characteristics of the fibre and resulting product.

Opportunities to increase production

In the past, industry has harvested and milled various quantities of beetle-infested lodgepole pine. The material has generally been harvested in the green or red attack stage (up to two years old). Today we have some mills in the impacted area that are processing over 50% "freshly attacked" wood. Most of it is of good quality, namely, not dried out and checked.

Forintek, with the assistance of FII, recently evaluated the properties of lumber with beetle-transmitted bluestain. We have shown that bluestain has no practical effect on the structural properties of lodgepole pine. We have produced a Fact Sheet that has been translated into Japanese.

That hasn't satisfied some customers who reject the product from an appearance perspective, i.e. J-grade in Japan. Home Depot has recently placed restrictions on the percentage of blue-stained dimension lumber that they are willing to accept.

Consumers and builders often think any stain on wood is mold. Mold is being called "the new asbestos" and public hysteria is increasing, due to media interest plus lawyers and restoration consultants with a vested interest. Forintek has been helping to educate the public about the harmless nature of wood discolorations, including bluestain. In particular, we've produced this fact sheet together with UBC's School of Occupational and Environmental Hygiene.

A strong environmental case can be made around beetle-killed lumber. Think about it – It was cut from a dead tree which was not left to decay and release all that carbon dioxide into the atmosphere. It does present some interesting marketing opportunities.

Some sawmills have had experience in processing trees at the gray attack stage (dead more than two years). The logs are costlier to process. They are dried and checked, and that results in more energy consumption in breakdown and shorter or narrower boards. Lumber and grade recoveries are also lower. Greater downtime is also an issue, dry logs are brittle and will crack and fall apart during handling, transportation and processing in the mill. These companies reported processing up to 4% dead wood. Moving up to 60% pine, as some have suggested, will pose a major challenge to sawmillers.

The growing oversupply of wood fibre globally is a further complication. It is not the best time to increase commodity production. In North America, there are demand limitations for commodity lumber products and higher volumes would simply drive down prices and have obvious repercussions for our trading relationship with the US.

One solution to the commodity lumber oversupply is to grow demand – Grow the wood construction market in North America, particularly in non-residential and multi-family hybrid construction. The current missed opportunity in the non-residential construction market in the US is equal to 4.4 billion board feet in lumber and 3.5 billion square feet in structural panel.

Premier Campbell has publicly announced that wood would play a prominent role in the 2010 Olympics, provided there is a cost benefit to wood, or at least no penalty. The Olympic construction program offers opportunities for a wide range of wood and wood-component hybrid structures – from multi-family housing units and associated commercial buildings to showcases for dramatic wood buildings, such as ice arenas, new Nordic and Sliding installations at Whistler, an expansion of the Vancouver Convention Centre and a new Convention Centre in Richmond. These long-span, large structures are an opportunity to resolve issues in structural performance, connections and life safety code compliance.

The Olympics provide British Columbia with a linchpin to mount an aggressive North American initiative that would significantly grow new markets and new applications for wood construction.

The Province, through FII, is identifying and developing new market opportunities in our existing wood construction markets, such as North America and Japan, as well as investing in emerging markets like China, Taiwan and Korea.

Whether it is defending existing markets from steel or concrete or growing market share in existing markets or developing emerging markets, all require a multi-faceted approach, one which is built on partnerships involving industry, government, research institutions and communities. It also has to be a balanced strategy which includes knowledge of the market place, promotion and advocacy, applied research around wood product and systems performance, regulatory support and. most important, a concerted and aggressive marketing effort from industry.

Alternative products and applications

OSB may be another opportunity for beetle-killed wood. In Canada, OSB is generally associated with aspen, a cheap and plentiful resource. However, the US and EW both produce OSB from pine. Compared to aspen, beetle-killed wood would likely result in lower strand quality and a higher proportion of fines. Further research would be needed. An OSB plant with a capacity of about 600,000 MSF 3/8" would consume approximately 100,000m^3 of wood per year. Ainsworth's OSB plant at 100 Mile is processing some pine.

Biofuels

Fuel wood and charcoal provide more than 14% of the world's total primary energy. Wood is the dominant energy source for more than 2 billion people, particularly in developing countries. According to FAO, 60% of the global wood harvest is used as fuel.

Wood fibre sequesters and stores CO_2 and is renewable, as opposed to fossil fuels.

In developed countries, steam and electricity production from wood is done at several plants on various scales. There is growing interest in wood as a substitute for fossil fuel. For example, in Ashland, Maine, a wood plant burns 400,000 tons per year and generates 40 megawatts of electricity – enough for 30,000 – 40,000 residential customers. The plant is responsible for $10 million in economic activity in the Ashland area. That's slightly smaller generating capacity than the Fort Nelson gas-fired plant and is slightly larger capacity than the Seaton Dam generation station near Lilloet.

It is noteworthy that conversion from oil- or gas-fired generation to wood-fired generation is relatively straightforward.

Ethanol-methanol production

There is considerable knowledge about how to convert wood fibre to alcohol. However, there are as yet no full-scale biomass to ethanol plants operating anywhere.

Conversion from wood is more complex than from other sources of biomass, such as corn or molasses. It requires hydrolysis of cellulose into sugars and then fermentation of the sugars to ethanol – a rather costly process that requires a large capital plant investment.

A big issue here would be security and length of supply.

New niche markets

Realistically, niche markets are not large-volume solutions, but they are certainly part of the answer. And as I indicated earlier, the approach has to be multi-faceted. For example, opportunities for character wide board flooring in China and Japan.

Log Homes are a major export product from Canada. Standing dead timber is pre-seasoned, dimensionally stable and ideal for log homes. – Low capital investment and high value. A booming market in Japan. You can profile the bluestain of the logs or make it a feature.

So far, we have a number of small companies with fragmented marketing efforts. There is potential for global market growth, e.g. Taiwan, Korea and China, for recreational venues. What about log buildings for Whistler in 2010? Communities could consider banding together to expand export marketing efforts.

My last example has a strong social dimension to it – Prefabricated homes to developing countries for disaster relief. BC has a viable prefab home industry. We have the technology to build termite and rot resistance into these homes. These kinds of initiatives do not require huge or long-term capital investment. These are just some examples. Others will evolve as we move forward.

Conclusions

As I said at the beginning of my presentation, I don't believe there is a silver bullet that will resolve this enormous problem.

However, we can make considerable progress to regain the value lost from the Mountain Pine Beetle epidemic by taking a series of little steps, e.g. employing a multi-faceted approach. In my presentation, I've tried to outline some of the major challenges ahead of us, like processing and utilizing older stands of beetle-killed timber, as well as how we expand existing markets and develop new opportunities. The key to success is through a "value chain approach", with a focus on partnering. Communities with the support of government, local industry and other stakeholders can play a key role in this regard. We have enormous experience in British

Columbia in working with wood, building with wood and living with wood. We can move forward by adding new knowledge, technology and innovation.

Check against delivery

Mayor Nate Bello's speech to the Pine Beetle event (Quesnel, Nov 21, 2003) regarding the socio-economic impacts of the pine beetle infestation and what we can do about it

Good afternoon Premier Campbell, members of Cabinet, visitors to our community, and local residents. I'm honoured to have the opportunity to speak to you today about the community impacts of the mountain pine beetle infestation, and what we might start doing about that.

We are especially honoured to have you and your cabinet colleagues here with us today, Premier Campbell. It speaks well of your government's concerns about the matters at hand.

Before I get started, please let me recognize other members of my Council and the Cariboo Regional District [acknowledgements, if there are such reps]

I want to touch on two main points:

1. The scope of this problem is unprecedented, and compounds other problems that rural communities are facing
2. Fortunately, there are concrete steps available, but extraordinary leadership and action on all of our parts is required.

Scope of the problem

I think that this needs to be said: barring significant interventions, or an economic miracle, a number of communities in the central interior of BC are facing profound, unprecedented economic and social adjustment over the next 10 to 15 years, including a significant loss of population.

There have been many setbacks for forestry communities, and I appreciate that coastal communities have been particularly hard hit in recent years.

But the beetle problem is in a league of its own. Unlike the coastal situation, where current timber resources remain largely intact regardless of plant shutdowns, the beetles are eliminating vast areas of the forest from timber harvesting for up to 80 years. That is a long time, and most of us in this room will be long gone.

Opportunities like Nechako Basin oil and gas, new mines, and things we haven't thought of may help restore the economic base of some communities. However, that is speculation, and we cannot just wait and hope. There is already a palpable chill on investment in the interior because of this problem, and that may get much worse.

While forest companies are likely to survive and thrive – and are already spending tens of millions in Quesnel alone to retool for the opportunities ahead, thank God – it seems inevitable that there will be significantly fewer people employed by current industry within ten years or so. Impacts from the beetles will be compounded by continuing technological improvements that reduce jobs.

Let's look at my town for a moment.

We're one of the harder hit areas, and one of the most heavily forestry dependent communities in BC (which is saying something). Ignoring the pulp and fibreboard industries, at least 1,800 people work directly in the local forest industry.

Assuming that each of those jobs supports one other job elsewhere in the community, and assuming that each direct or indirect job supports one other family member, there are about 7,200 people most directly dependent on the current solid wood industry in Quesnel. To repeat, that ignores pulp and fibreboard, which may also be affected beyond 15 years.

Our timber cut may be reduced by 50% or more from current levels in 10 to 15 years. That may be a best case, and to repeat, this is not like a plant shutdown where another firm might be able to utilize the timber resource to do something else. As far as this and the next couple of generations are concerned, it's permanent.

If 7,200 people are most directly affected by an AAC cutback in Quesnel, and the cut is reduced by half, does that mean that we're looking at a population loss of 3,600 people in Quesnel? An appalling possibility, but a real one without unprecedented action

Leadership and action

The possible impacts here and elsewhere obviously raise crucial policy and program questions for governments. There is no doubt that the BC and federal governments will intervene in some way, but how?

The little pine beetle is presenting an opportunity for governments to help transform the economy of the central interior. We have no choice but to look at it that way.

A huge silvicultural program is likely on the drawing boards, or should be, in the face of the beetle infestation. Both the BC and federal governments would be expected to invest in such programs. If that work extends beyond the next 15 years, it will help mitigate some of the job losses on the far horizon.

But there is an investment that, in my opinion, is just as important as silvicultural work. That is an investment in economic infrastructure that will assist our communities, for so long dependent on the primary forest industry, to diversify our economic base and build for a future a generation away.

By "economic infrastructure," I mean more than roads and sewers. I mean advanced telecommunications, cultural amenities, advanced training facilities, tourism infrastructure, and other things that urban areas take for granted, which our current tax bases will not pay for without help, and which we must have if we are to have a fighting chance to survive.

So where is the financing going to come from?

I, and many of colleagues in rural communities across Canada, have noticed that federal and provincial governments have a strong propensity to invest large dollars into urban projects, both public and private. Those investments likely make a lot of sense, or governments might not make them so often.

Let's take the Vancouver Trade and Convention centre. A $495 million dollar project, 82 percent funded by the BC and federal governments, producing 7,500 direct, full time jobs, with major paybacks to both governments through increased tax revenues. Cost of each job: about $67,000, and 82% paid for by taxpayers' dollars.

Since governments invest huge dollars into urban development projects, government investment in development projects must be OK, and I am not at all criticizing those investments. They obviously make good economic sense.

However, at the same time as governments are investing hundreds of millions of dollars into urban development projects, it is increasingly difficult to find public investment dollars for rural economic development projects.

That is understandable, from a pragmatic point of view, since it is almost impossible for us to conduct the economic analysis and lobbying campaigns that urban proponents can muster, let alone the political power. Just a fact of life.

So we must assume that governments are simply unaware that, on a micro scale, there are many, many sensible, practical, reasonable projects in rural communities, including every town represented in this room.

Given the scale of our problems, and the fact that public investments in development projects happen all of the time, there is no doubt in my mind that governments must come to the table with major, unprecedented funding for economic infrastructure in our region.

And I'm not talking about make-work projects!

Part of that funding must be reallocated from urban projects. Common sense and decency provides no other option. However, there is a ready source of financing to help.

For the last couple of years, and for a few more years, governments are making a windfall on the elevated AACs in our region. I suggest respectfully that that windfall is the source of a major part of the funding required to smooth the transition in our communities.

And what would those investments be?

Mr. Premier, Quesnel has an excellent economic development program, as do many or all of the communities most affected by this problem. We just can't find the cash to move on that program more than a baby step each year, and that's not fast enough.

In addition, there are promising regional infrastructure projects, like creating a container port at Prince Rupert.

Lee Malleau will talk more about community economic development in a moment.

Here are some immediate actions that could be taken:

1. We must work with the BC government and the federal government to form an overall strategy, and then get on with it as a team. To that end, form a senior inter-agency working group of the BC and federal governments, reporting directly to ministers, working with a broader multi-stakeholder group that includes our communities and other stakeholders.

2. Make available "best practice" information on what other regions may have done successfully to make the sort of transition that we're up against.

3. As discussed earlier, do the right thing and give us a fair shake at major economic infrastructure dollars.

4. Put together and act on a strong communication effort to help blunt the chill on investment.

5. Given our challenges, give affected communities preferential treatment when it comes to major initiatives, like 2010 Olympics legacy funding

6. Be prepared to look at aggressive new approaches, like special development zones with preferential taxation rates. The best practice work will give us other clues.

But don't set up a grand new agency. Locally, we know most of what we need to do, and we're not afraid of careful scrutiny. We simply need the resources to act on the things that make sense to all parties concerned, in the face of unprecedented change.

The heart of the heartland expects responsible action, and the next decade will be very exciting here indeed.

UNBC Mountain Pine Beetle Symposium

Quesnel 21 November, 2003

FUTURE FORESTS

Max Blouw
VP Research
UNBC

blouw@unbc.ca

UNBC

The Folly of Futurism

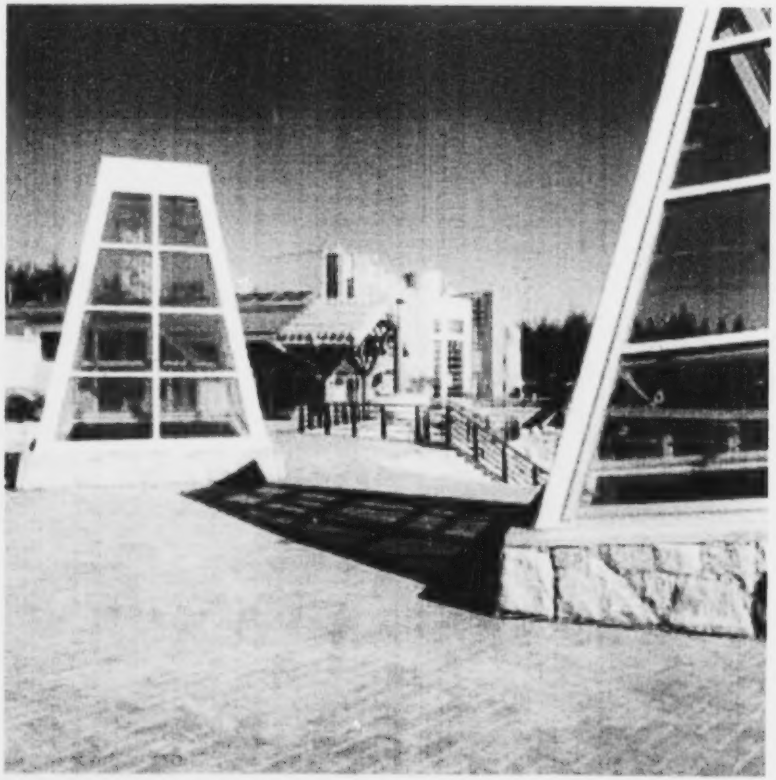
"We are here,

And it is now.

Further than that

all human knowledge

is moonshine"



H.L. Mencken 1880-1956

UNBC

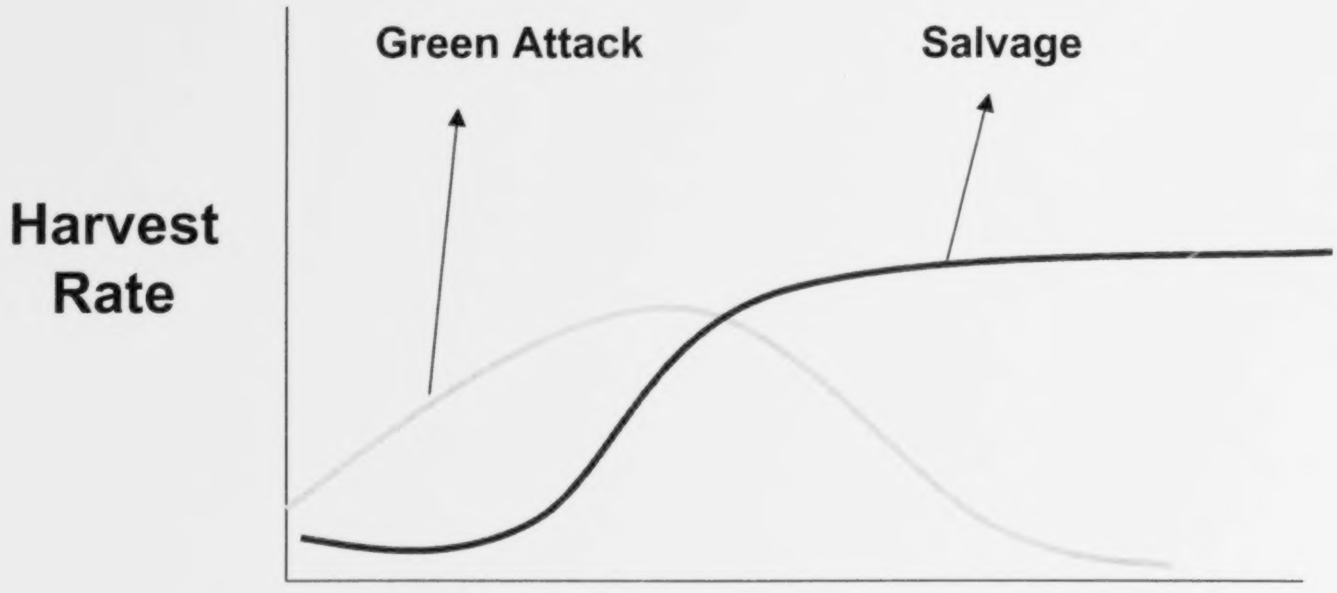
Ignorance

It’s not what we don’t know that hurts,

It’s what we know that ain’t so.

Will Rogers 1879-1935

The Future: Driving Forces
Mountain Pine Beetle



- Shapes of curves will vary
- Duration of salvage will vary
- Repeated at many localities
- Asynchronous, long term

Short term increase in fiber supply – longer term decrease

The Future: Driving Forces

Social License:

- Public support / tolerance
- Land claims; semi-private
- Tenure reform; ...private?
- Multiple Uses; footprint
  - oil and gas
  - mining
  - agriculture
  - recreation / tourism
  - protected areas

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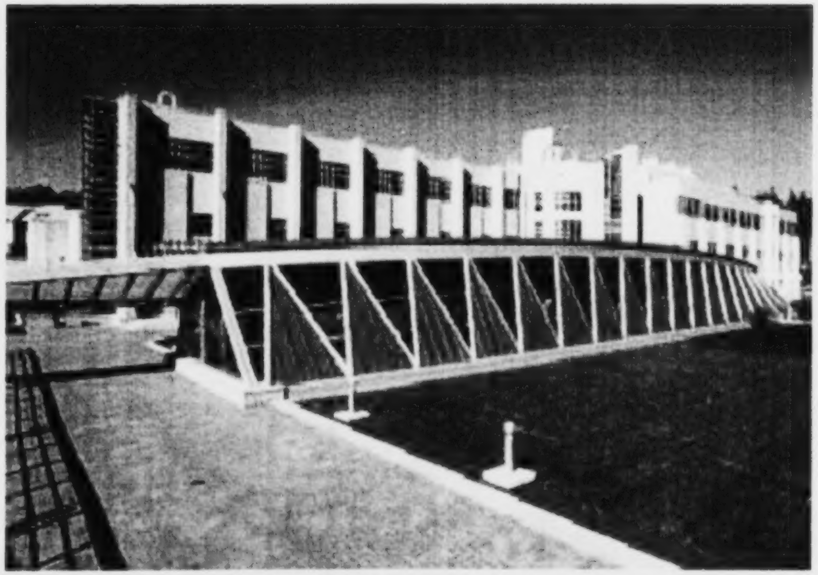
The Future: Driving Forces



Climate Change:

- Ongoing, indefinitely
- Accelerating?
- Fire, Flood, Pestilence
- Species changes
- Public costs
- Opportunities; farming…

The Future: Driving Forces

Economic Agents:

- Market pricing – auctions
- Trade constraints
- Commodity price swings
- Demographic changes
  eg. Ageing, rural-urban
- Carbon economy? Kyoto
- Alternate building materials
- Available fiber supply

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The Future: Driving Forces

Regulatory Forces:

- Results based code
- Certification (by…?)
- Streamlining (standards)
- Cross-industry; integrated management
- Reforestation - responses to climate change?

Future Forests: Short Term <20yr

Single Species Fiber Glut:

- Pressure to innovate: new uses, new products, new markets, new processes
- Windfall of funds: to companies and to the public purse
- Increased international pressure for change in export practices (quotas, tariffs, etc.) and possible restriction of markets

UNBC

Future Forests: Long Term >20yr

Smaller:

- fiber volume
- export volume
- # of big co.'s

Larger:

- big companies
- number of small companies

Smarter:

- more markets
- more products from different species
- higher value
- innovation based
- strategic alliances and partnerships

UNBC

Response to Forces

- **Innovate**: through corporate and public research and development
- **Educate** highly qualified personnel for a new knowledge-based industry
- **Build** heartland capacity - economic engine
- **In the north**, where the resource is located
- **Using funds** generated in the short-term, windfall years (place in trust, foundation)
- **Build strategic partnerships** internationally
- **Maximize product value,** reduce volume

UNBC

Future Forests

An optimist is someone who thinks the future is uncertain

Unknown

An optimistic view of the future would hold that it offers an excellent opportunity to **diversify** the forest industry through entrepreneurship, both in markets and products, to **create higher value** from lower volumes of fiber, and to **foster an innovative high technology resource economy**.

- ***Research, Development, and Highly Educated People are Essential***

Timely Response

Getting caught is the mother of invention.

Robert Byrne

The time to innovate is when there is great need, and when we have the resources to meet the need.

The time to begin is now.

BC's Pine Beetle Crisis:
The Conservation and Tourism Response

Ric Careless, Executive Director, Wilderness Tourism Association.

Delivered at the Premier's Pine Beetle Conference at Quesnel, Nov. 21, 2003

Introduction

Interior BC faces a crisis of massive dimensions with enormous consequences to communities, industry, and nature. There is a tragedy in the making. Meeting this challenge will require all of us to find solutions that meet economic and environmental realities, solutions that will work in the short term and the long. To do this we must base our actions on rational science rather than rhetoric and fear. We care about forest jobs and about tourism jobs. We care about the land. Therefore we have to pull together to find solutions that will solve this crisis - for the economy, for the environment, for our communities.

Parks & Beetles: the myth and the science

Some would scapegoat our parks as causing the beetle infestation. They say we should log the parks. But is this myth or science?

According to the BC and Canadian Forest Service experts, these are the facts.

Beetles are a natural part of pine forests; they are endemic. Outbreaks occur regularly in pine forests. However, their populations grow explosively when:

- There is a lot of old growth pine. This has occurred in interior BC due decades of fire control
- There is a lack of cold winters to control the beetle population numbers. Winter temperatures in BC have been warm in recent years

Only 8% of pine occur in protected areas. Logging the parks would not begin to solve the beetle problem. The spread is simply happening too fast. And the outbreaks are coming from everywhere pine trees occur and beetles live. This year there were 1,000 simultaneous outbreak in locations across the interior from Houston to Invermere; few of these were from parks. For example: the hardest hit beetle location - the Quesnel TSA - didn't experience outbreaks that originated in parks.

It is true that one major outbreak came out of Tweedsmuir Park several years ago. Part of this infestation first came into the park from the Morice TSA.

When the Ministries of Parks and Forests, industry, and environmentalists started to collaborate, the government of the day failed to provide the funding needed to slow the beetles using burns and site-specific falling. We must learn from this. Solutions can be found, but they must be properly supported if they are to work.

Threats of Markets Campaign

Rather than solve anything, logging the parks could lead to chaos. The trigger for such an action could occur if trees cut in parks crossed park boundaries and were delivered to sawmills. Not only would the individual companies and communities involved in this activity be at risk of global market targeting, but so too would all major forest companies who operate in the BC interior. It would render BC's interior timber 'a brand at risk' from international forest campaigners in the US, Europe, and now Asia, some of whom would likely take a very hard-line and high-media profile on this issue. The effect could easily be to bring Great Bear Rainforest type market strife to the interior. Such action could well end up becoming enmeshed in the already difficult Softwood Lumber conflict.

Up to now the interior has been spared the kind of eco-market trauma that hurt the coast. And the last thing that interior communities or the companies that operate here need is the conflict that such market action would bring. Especially when we are all facing a major crisis due to the beetles. We need to be all working together, not torn apart. And with the Olympics coming we need to showcase cooperation, innovation, economic vitality, and conservation stewardship. Surely, what we all need is peace not war.

Ask Bob Findlay who used to run MacMillan-Bloedel during Clayoquot or ask Patrick Moore who campaigned with the Forest Alliance for years around the world to protect BC markets. Ask them if they think a replay of the Great Bear campaign in the interior would help. Especially now. The fact is that top-level forest industry leaders in Canfor, Slocan, COFI as well as the Chief Forester and the Beetle Boss all agree: logging the parks is not the solution. It could be catastrophic for industry and communities here. And it would not stop the beetles.

However, while commercial logging in parks could have dire consequences, there are beetle management strategies that can be taken in parks as part of the overall approach to dealing with the beetle crisis. These include prescribed burns, and selection tree fall and burn, as is being practiced in places like Banff National Park. Such approaches are consistent with international conservation principles.

What are the Real Solutions Then?

The real solutions lie in the fact that, according to the Chief Forester, **there will be far more wood killed by the beetles than we will be able to harvest.** This is because even logging flat-out to the capacity of the industry (and including mill expansions and new forest products applications) the pace of beetle spread will simply far exceed our harvesting capabilities. Put simply, a large volume - and hence a large area of forest land - will go unlogged.

Prioritize Wood Harvest Strategy for Economic AND Environmental Objectives

Therefore **the key issue is to prioritize where we should log** - to control beetles expansion, to salvage the best and most dead wood, to smooth out the AAC crash effect, and to allow for non-timber values.

If we work strategically we can allocate some of the volume that will not be harvested (due to the sheer size of the outbreak) to safeguard conservation values in parks and wilderness, in key wildlife habitats (such as deer winter ranges), riparian zones, tourism areas etc. We can care for all those conservation values that make BC special to all of us. Because if we work together we can manage for these values **and** harvest the maximum volumes of the beetle kill wood.

These approaches can work for conservation because there is a future after beetles. Even severe infestations typically take only part of the forest stands. After the infestation dies out, there is still a biologically functioning forest. This regenerates and 15 - 20 years later the effect of the beetles has passed. Indeed the forest has renewed itself. After all, that is the ecological role of the beetles in pine forests. You can see this in post beetle infestation locations like Waterton National Park and Anahim Lake.

A lot of the concern associated with the post-beetle stage is said to be the risk of fire. However, according to fire experts, this may not be entirely accurate. They say the greatest flammability risk in forests comes from the oils associated with the needles of live trees in times of high temperatures and drought. The beetle-kill trees no longer contain these chemicals. Still the dead trees will pose a fire risk, but they won't necessarily worsen things. The primary concern for fire risk as always will be weather conditions.

Land Use Plans Provide Basis to Work Together

We have a real advantage in interior BC that can help us work together strategically and prioritize our efforts in dealing with the beetles. Ten years ago this province was torn by conflict. In rural communities, neighbours faced off against neighbours over the future of their forests. But a decade of persistent work by so many people, from all walks of life, moved this conflict to co-operation. And the land use plans were the result. And while they weren't perfect - as is so often the case with consensus agreements - they did teach British Columbians how to cooperate and work together. In the end the plans that resulted offered much increased certainty for all sectors.

Today in this time of crisis, these plans and the effort that built them offer us a real advantage. We have the opportunity to 'harvest the peace'. The plans give us a starting place to help determine which locations should be the priority for extensive logging - especially in the Enhanced and Integrated Forest Zones (where the best growing sites occur) - and also those areas where the conservation values are higher and timber often less feasible to access - such as in the Special Management Zones.

Tourism Can Play a Role

The tourism industry can play a role in helping to diversify the heartland economy especially in the post AAC crash era. The nature based tourism industry in rural BC is worth over $2 billion/year and is growing at 11% annually. As well, government initiatives such as the Resort Task Force can amplify this. And too, there is the prospect for a province–wide tourism uplift due to the Olympics. To reap the potential of tourism in the face of the beetle crisis, we must be strategic and retain those wildlife, fish, parks, and roadless area values this industry depends on. Tourism operators have been through beetle kill disasters before and survived. Today people like Duncan Stewart - one of the premier operators in the west Chilcotin – operates a tourism lodge and fly in fishing business that is thriving. He says that although there were a few tough years, the fact that the forest in his area remained unlogged and unroaded has resulted in today's high value tourism product.

Conclusion

The fact is the beetle crisis has the potential to be a tragedy for interior BC. But if we work together, if we all participate in creating solutions, if we draw on the collaborative experience we have gained through building our land use plans, and if we use these to help us to prioritize so as to get the best for our companies, our communities and nature, I know we will succeed. We will meet this crisis and we will prevail.